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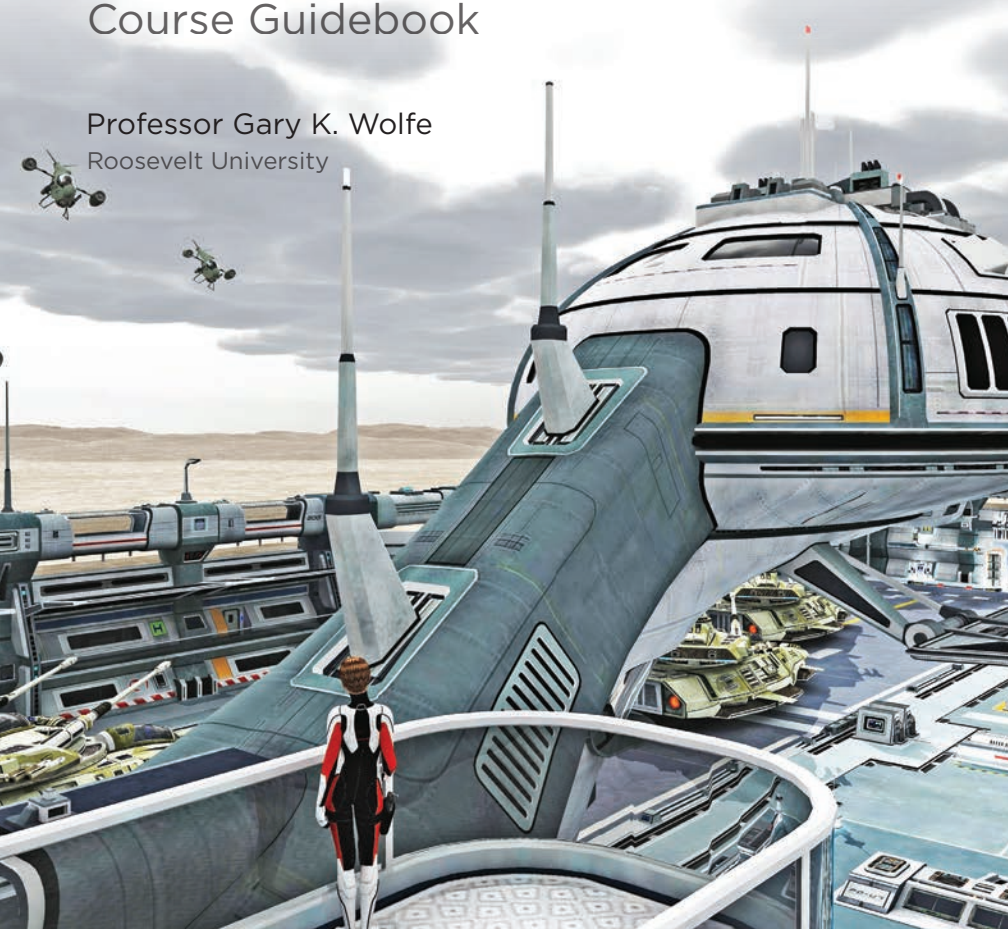
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How Great Science Fiction Works

Course Guidebook

Professor Gary K. Wolfe
Roosevelt University



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Dr. Gary K. Wolfe is a Professor of Humanities in Roosevelt University's Evelyn T. Stone College of Professional Studies. He has also served in various administrative capacities at the university since he began teaching there in 1971. He earned his B.A. from The University of Kansas and his Ph.D. from The University of Chicago.

Dr. Wolfe's scholarly and critical work has focused on science fiction and other forms of fantastic literature. For his work, he has received the Pilgrim Award from the Science Fiction Research Association, the Distinguished Scholarship Award from the International Association for the Fantastic in the Arts, the Eaton Award from the Eaton Science Fiction Conference, the British Science Fiction Association Award for Best Non-Fiction (for his collection *Soundings: Reviews 1992–1996*), and the World Fantasy Award for his critical writing. He has twice been nominated for the Hugo Award from the World Science Fiction Convention.

Dr. Wolfe has written a monthly review column for *Locus* magazine since 1992 and a regular science fiction review column for the *Chicago Tribune*'s *Printers Row Journal* since 2013. His most recent books are *Sightings: Reviews 2002–2006* and *Evaporating Genres: Essays on Fantastic Literature*, which received the 2012 Locus Award for Non-Fiction. Since 2010, he has cohosted a weekly podcast on science fiction with Australian editor Jonathan Strahan. The Coode Street Podcast was also nominated for four awards in 2011 and Hugo Awards in 2012 and 2013.

In September 2012, the Library of America published *American Science Fiction: Nine Classic Novels of the 1950s*, which Dr. Wolfe edited. In addition, he curated a companion website for the two-volume boxed set. Dr. Wolfe also has been chosen as a Guest of Honor at Readercon in Massachusetts and as an Academic Guest of Honour at Archipelacon, the Nordic SF & Fantasy Convention in Finland. ■

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How Great Science Fiction Works

This course examines the history, major themes, and major works of science fiction literature, explaining how the genre evolved, how it relates to broader cultural concerns and historical movements, and what techniques and conventions have been developed by science fiction writers that make it a unique tradition of literature. Although some lectures touch on film, drama, publishing history, or even art, the main focus is on the large body of literary work that has developed mostly in the past century, with occasional looks at its precursors.

The lectures generally fall into four broad groups: literary history, science fiction themes, science fiction settings, and science fiction "icons." The nine lectures that trace the history of science fiction include an examination of its origins in a few proto-science fiction works and Mary Shelley's *Frankenstein*; the 19th-century influences of Edgar Allan Poe, Jules Verne, and H. G. Wells; the so-called pulp era of the 1920s and 1930s; the golden ages of the 1940s and 1950s; the rise of the New Wave in the 1960s and cyberpunk in the 1980s; the revival of New Space Opera in the 1990s; and the growing diversity of the field since 2000.

Major themes covered include science fiction treatments of history, evolution and deep time (the very distant past or future), utopia and dystopia, imaginary wars, religion, environmental and ecological concerns, and questions of gender and feminist thought. Because settings are often a central feature of science fiction narratives, a smaller group of lectures explores such common settings as the planet, the wasteland, and the city. Finally, another group of lectures examines familiar science fiction icons—those recurrent images that have become emblematic of the genre's sense of wonder and that many readers regard as characteristic images central to the field, including spaceships, robots, aliens, and mysterious artifacts. A final lecture considers the current state of science fiction, its relationship to mainstream literature, and speculations about its future development.

Each of the lectures includes both a broad overview of the topic and a more in-depth examination of key works that illustrate how major writers have developed the topic—how the monster story becomes *Frankenstein*, how the invasion tale becomes Wells's *The War of the Worlds*, how the war story becomes Heinlein's *Starship Troopers* or Haldeman's *The Forever War*, and so on. Many of the works discussed are broadly familiar classics of science fiction, including Verne's *From the Earth to the Moon*, Bradbury's *The Martian Chronicles*, and Herbert's *Dune*, but many, such as Connie Willis's *Doomsday Book* or Stephen Baxter's *Ring*, are likely to be familiar only to science fiction fans. Some are very recent novels, such as Neal Stephenson's *Seveneves* or Paoli Bacigalupi's *The Water Knife*, which illustrate how the classic themes of science fiction survive in cutting-edge fiction, how science fiction has broadened its reach into such areas as environmental literature, and how it even sometimes makes the bestseller lists.

The lectures are designed to provide listeners and viewers with a detailed understanding of the broad range and history of science fiction literature, while also appealing to experienced science fiction fans and, perhaps, to the one-time science fiction reader who has since drifted away from the genre and wants a convenient and concise way to catch up on what's been going on. A fundamental theme that runs throughout the lectures is that science fiction can be not only great literature but a significant and important body of speculative thought on issues that are crucial to our society and that are direct expressions of our hopes, fears, and dreams.

LECTURE 1

Mary Shelley and the Birth of Science Fiction

With some exceptions, science fiction has seldom been a widely popular literature. In some ways, it has been more like jazz or contemporary classical music, with a devoted but limited audience of followers. Interestingly, this is not the case when we turn to film, where science fiction titles are well-represented on almost any list of top-grossing movies. Indeed, one question we'll ask in these lectures is: How can science fiction be so broadly popular in one form and merely a special-interest niche in another? However, most of what we will discuss in this course will be the literary side of science fiction; we begin that discussion in this lecture by defining what science fiction is and is not.

Definitions and Origins

- One of the first requirements we might list for a work of science fiction is that it should be possible—involving things that we might actually create, places we might actually go, or societies that might actually evolve. A science fiction story can be about dragons, for example, but not if they're magical dragons.
 - In the 1970s and 1980s, the science fiction writer Anne McCaffrey wrote a series of novels about dragons that were created through genetic engineering and whose stories take place on another planet. They were, she insisted, science fiction dragons—and she was right. Using only speculation from known science—without resorting to the supernatural or mythological—she could explain how her dragons came to be and even how they flew.

» The same is not true of J. R. R. Tolkien's Smaug in *The Hobbit*, who inhabits the mythical world of Middle-earth.

- The great science fiction author and critic Samuel R. Delany described realistic fiction as concerning events that could have happened; fantasy as concerning events that could not have happened; and science fiction as concerning events that have not happened, that have not happened yet, or that might happen. It's a disarmingly simple definition but a useful one.

- For much of its history, science fiction was largely disregarded by serious readers of literature. Articles in such magazines as *Harper's* or *The Atlantic Monthly* described it as subliterary pulp work—and to a large extent they were right. As a result, science fiction's advocates often sought to find its origins in classical literature.
 » One early science fiction anthology included excerpts from Plato, Lucian of Samosata, Sir Thomas More, Rabelais, Tommaso Campanella, Francis Bacon, Jonathan Swift, and even the astronomer Johannes Kepler.

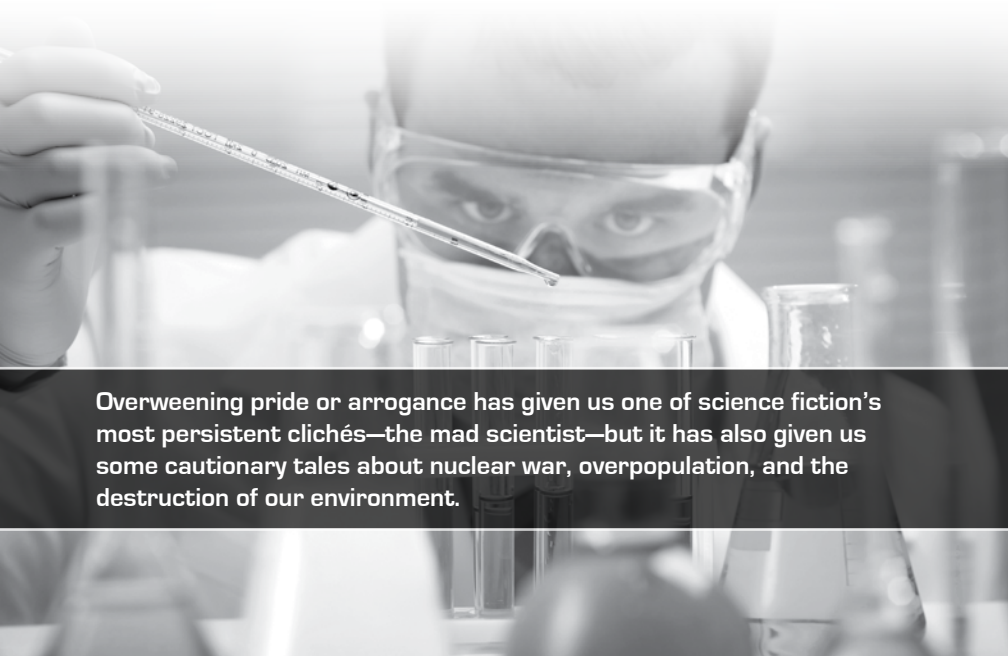
 » The problem with these historical excavations is that they're just that—excavations. Once critics and writers had an idea of what modern science fiction is, it became an exciting prospect to find older literature that resembled science fiction or depicted events that would later be the stuff of science fiction, such as voyages to the Moon. Never mind that the Greek-Syrian writer Lucian has his protagonist get to the Moon by strapping on a pair of wings or that he later meets the god Jupiter.

 » There's little evidence that these earlier writers had any influence on the writers who created modern science fiction. Further, if we view science fiction as a tradition of writing, in which writers influence other writers, play off each other, and create an ongoing dialogue about the possibilities of science and the future, then we need to look at somewhat more recent history—history that evolved in the wake of some of the modern notions of science.

- Put more simply, we can't have science fiction in the modern sense until we have science in the modern sense. And that, in turn, is largely a creation of the 17th and 18th centuries.

- Let's consider, for example, one of the most ancient and archetypal figures of storytelling—the monster. Monsters are literally as old as literature. Just about every great national story since the Sumerian Epic of Gilgamesh involves the hero confronting a monster—Perseus slaying Medusa, Saint George killing the dragon, Beowulf defeating Grendel and Grendel's mother and then facing a dragon.
 - Some of these monsters were created by gods and some were believed to be inhabitants of unexplored regions, but none was deliberately created by humans.

 - This brings us back to the non-magical dragons mentioned earlier. They were monsters created by us—by using science and technology, not magic spells. That, again, is why the genre is called *science* fiction. And, in fact, in the opinion of a number of literary historians, that's exactly where modern science fiction begins, with a monster created by science, not magic.



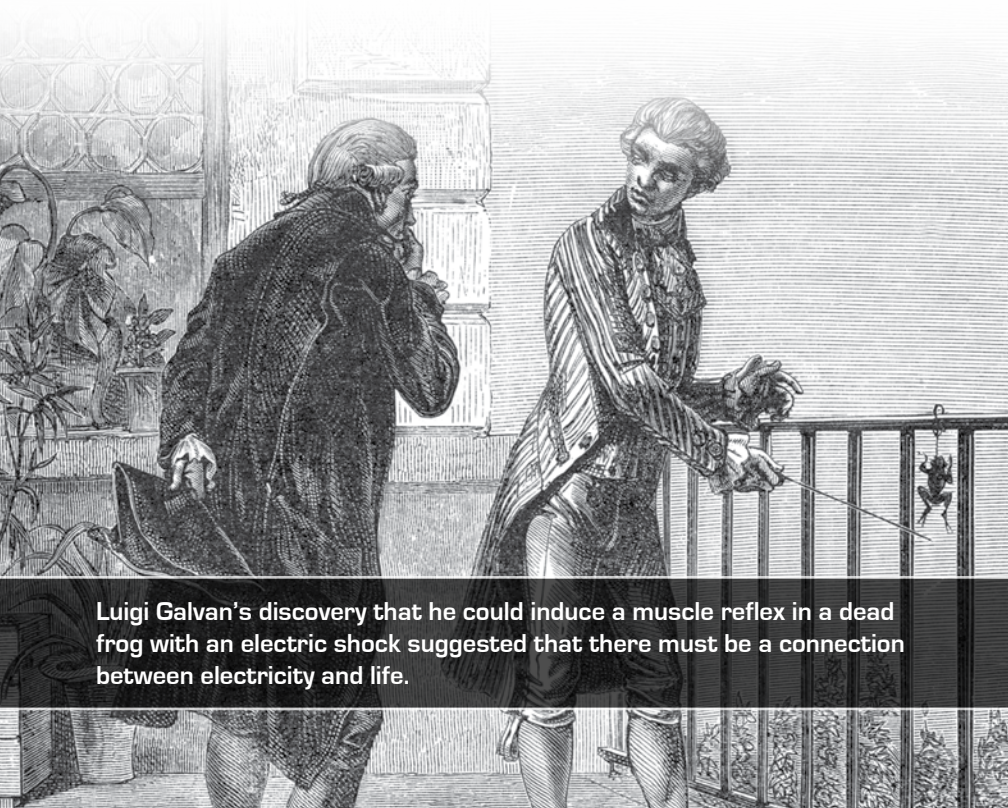
Overweening pride or arrogance has given us one of science fiction's most persistent clichés—the mad scientist—but it has also given us some cautionary tales about nuclear war, overpopulation, and the destruction of our environment.

Science Fiction's First Monster

- It's not completely fanciful to say that science fiction began with three things: a dead frog, a volcano, and a teenage bride.

- The dead frog was one that an Italian physician named Luigi Galvani was experimenting with in the 1780s, when he found that a mild electric shock could cause the frog's leg to twitch. It was just an induced muscle reflex, but it suggested that there might be a connection between electricity and life.

- The volcano was Mount Tambora in Indonesia, which exploded in 1815 in one of the largest eruptions in recorded history. It threw up a huge cloud of ash that circled the world for more than a year, lowering global temperatures and causing crop failures. It led to such a cold and rainy climate that 1816 was sometimes called the "year without a summer."



Luigi Galvan's discovery that he could induce a muscle reflex in a dead frog with an electric shock suggested that there must be a connection between electricity and life.

- In that same year, the English poet Percy Bysshe Shelley brought his 18-year-old wife, Mary, to visit his friend Lord Byron at Byron's summer home in Switzerland. Because the weather was too miserable to go outdoors, Byron suggested an indoor activity: Each of the guests would make up a ghost story and read it to the others in the chilly evenings.



MARY SHELLEY

- Byron wrote a fragment of a poem. Another visitor, Dr. John Polidori, wrote a reasonably scary story called "The Vampyre," which later became one of the inspirations for Bram Stoker's novel *Dracula*. The teenage Mary based her story on a nightmare she'd had.

- The monster in Mary's story was created not by magic or alchemy—Victor Frankenstein was a scientist who rejected those supernatural ideas—but by the application of electricity in an attempt to reanimate dead tissue. In fact, Mary had read about the experiments by Galvani on the dead frog and wondered, not unreasonably for the science of her day, if electricity could actually be used for that purpose.

- Those who have never read Mary Shelley's story may be surprised at a number of key elements that are barely touched on in films based on the novel. For one thing, the novel begins with a series of letters from an adventurer named Robert Walton to his sister. On one of his journeys, Walton encounters Victor Frankenstein, whose story makes up the more familiar part of the novel.

- Victor tells us that as a teenager, he became enamored of alchemy and what was then called natural philosophy. But when Victor mentions this to his father, the father explains to him that "a modern system of

science had been introduced which possessed much greater powers than the ancient." As a result, Victor says, "I at once gave up my former occupations."

- Victor's rejection of alchemy and natural philosophy in favor of modern science is a key moment in his education and in the history of science fiction. Natural philosophy encompassed patterns of quasi-scientific or pseudoscientific thought that had built up over the centuries, sometimes leading to supernatural results. Victor abandons all suggestion of supernaturalism in the creation of his creature, as does Mary Shelley.

- Victor describes the creature that he brings to life as a "demoniacal corpse." Rejected by his creator, the creature flees. But for several chapters in the middle of the novel, the creature meets with Victor and tells him of his experiences. Eventually, the creature even learns to read and write; one of the first books he reads is John Milton's *Paradise Lost*, which he takes as a true history because he hasn't yet mastered the distinction between imagination and reality.

- The creature's hunger for learning makes for an interesting contrast with Victor's own education, not to mention Victor's various failures as a "father" or teacher of his creation. Having achieved his scientific breakthrough, Victor simply abandons it and all responsibility for it. When the creature demands that Victor create a companion, Victor at first agrees but later reneges on his promise. It's not difficult to understand why the creature becomes vengeful.

- In *Frankenstein*, Shelley invented one of the central concerns of science fiction: that a scientific education divorced from moral education and the abandonment of responsibility for one's own achievements could lead to disaster.

- It wasn't long before Frankenstein's creature got entirely out of Mary Shelley's hands. By the time she returned to England a few years later, her novel was already a hit stage play, focusing on the horror story and almost entirely overlooking the science. And a century later, one

of these stage adaptations gave the name Frankenstein to the creature itself—never named in the novel—leading to a misunderstanding that persists to this day.

- Unfortunately, that has been the case almost ever since, with more than 50 movies and innumerable comics, spinoff novels, action figures, and even breakfast cereals based on Shelley's work.
 - This brings us back to that point that science fiction movies sometimes oversimplify and even degrade the ideas of science fiction novels. The most famous Frankenstein movie was made in 1931, and there's no doubt that it is a classic horror film, but almost no one, either now or in the 1930s, viewed it as science fiction.

 - The same is true of all the dozens of Frankenstein movies ever since, many of which have reintroduced the same supernatural elements that Shelley so carefully excluded from her novel.

 - There is certainly some irony in how the first science fiction novel in the modern sense—the first novel to introduce a monster created by rational scientific experimentation rather than incantations or the intervention of the gods—should give rise to an entire industry of monsters of the irrational, but that has been one of the fates of science fiction.

 - At the same time, a number of actual science fiction movies, such as the *Terminator* series, have been based on Shelley's original idea: that of a creation turning on its creator. Technology, not monster tales, is the real heritage of *Frankenstein*.

Readings

Aldiss and Wingrove, *Trillion Year Spree*.

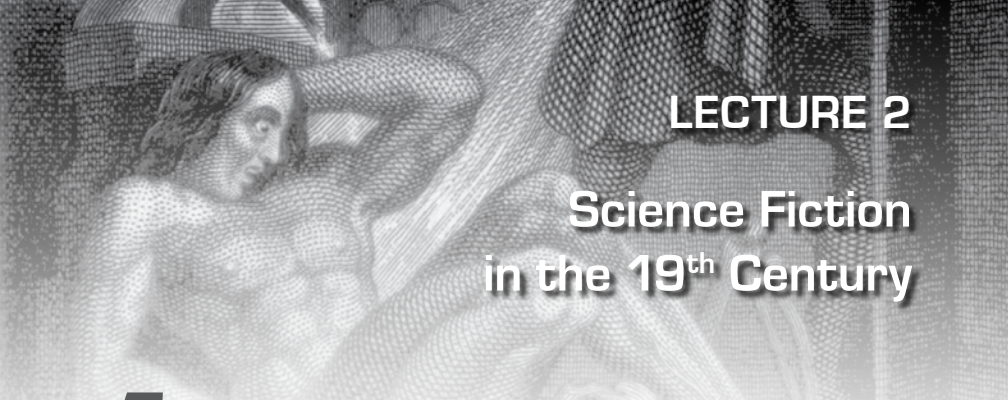
Roberts, *The History of Science Fiction*.

Shelley, *Frankenstein, or the Modern Prometheus*.

Questions

1 If science fiction is a popular genre that depends on ideas drawn from the sciences, when and how did we decide what science itself is? How do the marvelous inventions of science fiction differ from the marvelous magical inventions of fantasy or mythology?

2 Science fiction has long been regarded as something of a niche genre among readers, with its own specialty publications and awards and an organized but limited fandom. Yet in the movies, on television, and in the gaming world, it ranks among the most popular mass-market genres. Why is there such an apparent disconnect between the smaller readership of science fiction literature and the huge popularity of science fiction media?



LECTURE 2

Science Fiction in the 19th Century

Amazing Stories, the first pulp magazine devoted to science fiction, was initially published in April 1926, with three names on its cover: Edgar Allan Poe, Jules Verne, and H. G. Wells. Although none of these authors would have thought of himself as writing science fiction, it seems clear that 19th-century fiction was the cauldron from which the 20th-century science fiction story emerged. And each of these writers contributed in particular ways to what would later be major modes of science fiction writing—Verne with technological tales and fabulous voyages; Wells with science fiction as social commentary; and Poe with his propensity for publishing hoaxes that could be read as describing actual events.

Edgar Allan Poe

- When we think of popular forms of modern fiction—the short story, the terror tale, the detective story, the science fiction story—it can be rather stunning to find that one eccentric genius, one of the most colorful and disturbing figures in American literature, seems to have had a significant hand in the beginnings of just about all of them. Yet the nature of Poe's importance to these fields is difficult to pin down.

- Poe is cited as a formative influence by supernatural fiction writers from H. P. Lovecraft to Stephen King and Peter Straub, yet there's remarkably little supernatural content in most of Poe's fiction. His influence on science fiction is undeniable, yet he wrote few if any stories that depict scientists or the practice of science.

» One possible exception is a story entitled “The Facts in the Case of M. Valdemar.” Here, a mesmerist hypnotizes a dying man and somehow keeps him in a state of suspended animation for months, until he awakens him and the body immediately decays into a “nearly liquid mass of loathsome—of detestable putrescence.”



Edgar Allan Poe

» What is probably more revealing about this story, though, is that Poe originally published it without telling anyone it was fiction, so that many readers took it as a straight journalistic account. Poe was fascinated by hoaxes, and in the view of some critics, this is crucial to his relationship to science fiction—stories that, at least by the popular understanding of the day, could be read as something that might very well have been possible.

▸ Another of these stories was “The Unparalleled Adventure of One Hans Pfaall,” which appeared in 1835 and described the title character’s trip to the Moon. This is often regarded as one of Poe’s lesser works, but the British science fiction writer and critic Adam Roberts makes a persuasive case for its importance as early science fiction.

» The story begins in Rotterdam, when a bizarre-looking dwarf descends in a balloon, drops a manuscript, and flies away again. The manuscript tells how its author, a local bellows-mender named Hans Pfaall, decides to escape his creditors by constructing a balloon that will transport him to the Moon. Pfaall ends his tale by promising to reveal the wonders of the Moon later—but only if he is pardoned for the crime of murdering his creditors, killed in an unexpected explosion when his balloon was launched.

- At the end of the story, some bits of evidence are discovered that suggest the whole manuscript is a hoax, and Adam Roberts may be right in suggesting that the hoax ending has caused some critics to dismiss the story as a trifle. But when we look at the details of Pfaall's account, we see that they are worked out with as much scientific precision as was available to Poe in 1835.

- For example, he estimates the distance to the Moon as 237,000 miles and calculates how long his trip will take at his average speed. He worries about the loss of atmospheric pressure at high altitudes; invents a device to condense air out of the near vacuum of space; and cites the research of actual scientists, such as Giovanni Cassini. Perhaps most remarkably, he provides vivid descriptions of the curved surface of the Earth as it appears from various altitudes. Hoax or not, Poe, in the guise of Hans Pfaall, had thought through a Moon trip with all the discipline of a modern writer of hard science fiction.

- Poe wrote several other stories important to the history of science fiction, including "The Conversation of Eiros and Charmion," "Mellonta Tauta," and "A Descent into the Maelstrom." Perhaps most tantalizing is his only novel, *The Narrative of Arthur Gordon Pym of Nantucket*, a strange tale of an increasingly bizarre journey to the Antarctic, involving massive storms, cannibalism, a lost tribe of black people, unknown flora and fauna, and more. The work ends abruptly, prompting a number of writers to try their hand at sequels, including Jules Verne, H. P. Lovecraft, and Mat Johnson.

Jules Verne

- Early on, Poe was more popular in France than in the United States or England, and Jules Verne was one of his greatest fans. Not only did Verne write his own sequel to *Arthur Gordon Pym*, but another of Poe's hoaxes, an article in *The New York Sun* claiming that a European balloonist had crossed the Atlantic in three days, may have influenced Verne's 1863 novel *Five Weeks in a Balloon*.

- Verne cited "The Unparalleled Adventure of One Hans Pfaall" directly in one of his own early stories, "A Voyage in a Balloon" and alludes to it in his 1865 science fiction classic *From the Earth to the Moon*. He also followed Poe's lead from "Hans Pfaall" in more important ways.
 - Just as Poe tried to work out practical details, such as atmospheric pressure, oxygen levels, and buoyancy, Verne, too, devoted a fair amount of attention to practical problems, from the size of the cannon that would launch a capsule to the Moon to the geographical location of the launch.



Jules Verne

 - To be honest, however, Verne got many things wrong, including the idea that a cannon could be used to blast a manned capsule into outer space. But we can't blame him for failing to account for science that wasn't available when he was writing. He also believed that the capsule would travel through the *aether*, once thought to be an invisible substance that permeated the universe and provided the medium through which light traveled.

- For the most part, Verne's characters aren't that interesting. The most memorable are probably Captain Nemo in *Twenty Thousand Leagues under the Sea* and the airborne version of Nemo, Robur, in the much later *Robur the Conqueror.* But he pioneered a surprising number of themes and techniques of later science fiction. In all, he published 54 novels in his lifelong series of *Voyages Extraordinaires*, including *Journey to the Center of the Earth*, *The Mysterious Island*, and *Off on a Comet*.

- Verne continued publishing his extraordinary voyages until his death in 1905, and a few even appeared posthumously, although often edited or rewritten by Verne's son Michael. During the last few years of his life, he became aware of a young English writer named H. G. Wells, of whom he said: "I do not see the possibility of comparison between his work and mine. … It occurs to me that his stories do not repose on very scientific bases. … I make use of physics. He invents."

H. G. Wells

- In fact, H. G. Wells wasn't ignorant of science at all—he'd studied under the great English biologist Thomas Henry Huxley—but his vision of what science fiction could be was quite different from Verne's. His own assessment of Verne was much more generous than Verne's was of him. He wrote:

> He helped his reader to imagine it done and to realise what fun, excitement or mischief would ensue. Many of his inventions have "come true." But these stories of mine … do not pretend to deal with possible things; they are exercises of the imagination in a quite different field.

- Interestingly, one of the novels that Wells cited as a precursor to his own kind of what he called "scientific romance" was Mary Shelley's *Frankenstein*. Such stories, he argued, "do not aim to project a serious possibility; they aim indeed only at the same amount of conviction as one gets in a good gripping dream."



H. G. Wells

- For Wells, science fiction was, first and foremost, a vehicle for social criticism and only secondarily about technology, but that doesn't mean he ignored science. In fact, he was particularly



H. G. Wells's fascination with evolutionary theory played a role in *The War of the Worlds*; the Martians who invade Earth are described as almost all heads and brains.

influenced by the Darwinian ideas of evolution that he'd learned from Huxley and elsewhere. His first novel, *The Time Machine*, is a good example of how these ideas worked in his fiction.

» Wells hardly bothers trying to rationalize time travel; his time traveler (known by no other name) simply argues that time is merely a fourth dimension and that logically, if we can travel in the other three, we ought to be able to travel in this one, as well.

» Wells is far more interested in the society the traveler encounters when he arrives in the distant future of 802,701 A.D. There, he first encounters the Eloi, a beautiful but oddly childlike race living among huge but decaying buildings and showing a disturbing passivity toward life and death. Later, he encounters the brutal Morlocks,

who live entirely underground except at night and who tend the elaborate machinery that keeps the dual society functioning. They also feed off the Eloi, treating them essentially as cattle.

- The traveler speculates that a division already apparent in his own time had led to this dual evolution: the upper classes into the effete Eloi and the workers and miners into the Morlocks. The idea of such a dual society had been bothering Victorians for decades. In other words, Wells emerged not out of a tradition of technological extrapolation but out of one of social conscience.

- The idea of a technologically superior culture conquering a less advanced society—something the British Empire had done a good deal of—was central to *The War of the Worlds*. Only this time, England itself was on the receiving end of the advanced technologies. That novel also tapped into a sort of invasion anxiety that had been expressed in popular British literature for a few decades, although usually it was Europe or Asia that was the culprit.

- Like Verne, Wells wrote other influential science fiction, including *The Island of Doctor Moreau*, *The Invisible Man*, *In the Days of the Comet*, and *The World Set Free*. His explorations of utopia and dystopia can be found in such novels as *When the Sleeper Wakes*, *A Modern Utopia*, and *Men Like Gods*. Wells was also influential in introducing science fiction to other media, including possibly the most famous radio broadcast of all time, Orson Welles's adaptation of *The War of the Worlds*.

Readings

Verne, *From the Earth to the Moon*.

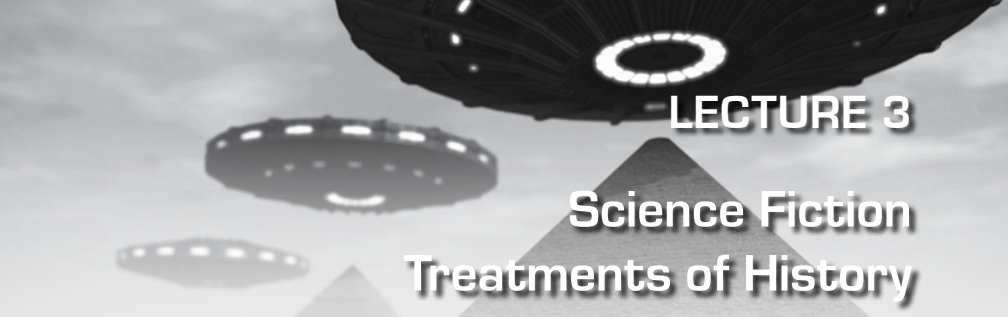
Wells, *The Time Machine*.

——, *The War of the Worlds*.

Questions

1 Edgar Allan Poe is better known for horror stories and mystery tales than for his science fiction. Yet is there some common intellectual or thematic thread in Poe's work that links these genres and that can account for his influence on writers as diverse as Jules Verne and Stephen King?

2 Jules Verne complained about H. G. Wells that "I make use of physics. He invents." But is there a real difference between science fiction that carefully works out its scenarios based on known science and science fiction that just "invents" new technologies for the sake of a good story? If so, what is that difference?



LECTURE 3

Science Fiction Treatments of History

So far, we've touched on the history of science fiction, but in this lecture, we'll focus on history *in* science fiction. History has been an invaluable resource for science fiction writers since the beginning of the modern genre, and some have argued that historical and science might be regarded as sister genres, both falling under the rubric of "speculative fiction." In this lecture, we'll examine how science fiction writers have approached historical themes in four ways: portraying the past, often in stories involving time travel; using historical events or periods as a template for future societies; adapting historical theories to construct future histories; and imagining how the world might have been altered had history gone in a different direction.

Portraying the Historical Past

- Portraying the historical past is the closest the science fiction writer comes to being a straight historical novelist. Most of the early novels and stories about traveling through time, from Edward Bellamy's *Looking Backward* to H. G. Wells's *The Time Machine*, involved visiting the future.

- An exception is Mark Twain's *A Connecticut Yankee in King Arthur's Court*, in which Hank Morgan, the manager of a munitions factory in Connecticut, gets hit over the head and is transported back in time to Arthurian England. Even though there is no science fiction rationale given for Hank's time travel, technology comes to play an increasingly important role in the story. The novel begins as a kind of comic parody



If we go far enough back in time, the settings of historical fiction become more speculative and more like science fiction; authors may turn to anthropology and archaeology for materials from which to build their worlds.

of Hank's romantic ideas of medieval chivalry but gradually becomes a much darker tale involving the problems of trying to change the past by improving the lives of its people.

- A later novel, L. Sprague de Camp's 1939 *Lest Darkness Fall*, is similar to Twain's work in that it deals with an archeologist who is transported back in time to 6th-century Rome. He sets out to prevent the Dark Ages from happening by introducing printing presses and teaching literacy and math. His efforts to introduce modern weaponry don't succeed, but in the end, he does manage to change the future.

- In a few other cases, the time traveler inadvertently ends up creating the actual history that we know. Michael Moorcock's *Behold the Man* was controversial in 1969 for its story of a time traveler who arrives in Nazareth to meet the historical Jesus. The boy he meets, though, is

severely retarded. By telling the parables of Jesus that he can recall, the time traveler gathers a following and eventually dies on the cross, giving us the story told in the New Testament.

- A number of novelists have used time travel as a way of getting at the purely historical tales they want to tell; in these cases, the purpose of the device is to place a contemporary character in a historical setting to provide the reader with a figure who is easy to identify with. Examples include Octavia Butler's novel *Kindred* and Jane Yolen's *The Devil's Arithmetic*. Both authors make powerful use of time travel as a narrative device for connecting contemporary readers to historical events, but neither actually described her novel as science fiction.

- One writer who clearly views her historical settings as a function of her science fiction is Connie Willis. Her most famous time-travel stories involve a group of historians in a near-future Oxford University who conduct their research by means of a time machine. The operation of the machine isn't clearly explained, but it has at least one rule apparently imposed by nature: Time travelers can't arrive at any time or place in which their actions might alter history; thus, the target dates set on the time machine aren't always precise.
 - This factor is important in Willis's *Doomsday Book*, from 1992. In this work, a young historian named Kivrin, planning to research English village life in the year 1320, mistakenly arrives in 1348, when the Black Plague is ravaging England. To complicate matters further, a serious flu epidemic is striking Oxford back in the 21st century, disabling members of the research team who know the coordinates to rescue her.

 - Although the narrative shifts between 14th-century England and future Oxford, the focus is on Kivrin's frustration at being able to do so little to help the plague victims and on the apocalyptic feeling the plague engenders.

 - According to Willis, end-of-the-world narratives are fascinating because the end of the world had already happened several times in human history, at least in terms of the world as it had been known.

Constructing Futuristic Societies

- Isaac Asimov is perhaps the most famous writer who uses historical events or periods as a template for future societies. In his Foundation series, he borrowed a good deal from Edward Gibbon's 18th-century classic *The History of the Decline and Fall of the Roman Empire*.
 - The original series of Foundation stories is based on an elaborate scheme involving a far-future galactic empire so large that it includes something like 25 million planets and has lasted for 12,000 years.
 - Like the Roman Empire, this galactic empire faces problems of scale: maintaining communications and supply lines, suppressing revolts and independence movements, keeping the economy stable, and so on. Surprisingly, there are no aliens or alien civilizations in Asimov's universe, and the series is set so far in the future that the home planet of Earth has been nearly forgotten.
 - In a sense, the real hero of the series is an idea. In fact, some critics have noted that in a genre not often known for characterization, ideas can sometimes emerge as the central elements that drive the plot. In Asimov's case, he imagined a science called psychohistory that involves large-scale statistical projections of the behavior of societies over long time periods and efforts to manage future developments.
 - Later in life, Asimov sought a way to link the Foundation stories to his other popular series of robot stories and future detective novels into one grand overarching conception, but he never fully abandoned his original template of Roman imperial history.
- Asimov was far from the only one to reimagine historical events in science fiction settings. Critics have also noticed similarities with Gibbon's *Decline and Fall* in Frank Herbert's *Dune* and its many sequels. Ray Bradbury organized his stories in *The Martian Chronicles* as a recapitulation of the American westward movement, with Martians sometimes standing in for Native Americans. And Robert A. Heinlein's *The Moon Is a Harsh Mistress* bears similarities to the history of the American Revolutionary War.

Adapting Historical Theories

- Some writers have looked not so much toward specific historical periods as toward broad theories of how history works. In this category, the two most important figures are the historians Arnold Toynbee and Oswald Spengler, both of whom found large cyclical patterns of growth, decadence, and decline over spans of thousands of years in world cultures.

- Although their notions have fallen out of favor with later historians, the idea of social and cultural patterns spanning centuries has attracted some science fiction writers. For example, an ambitious use of Spengler's ideas appears in James Blish's series of novels collectively titled *Cities in Flight*.
 - This series begins with two rather unlikely inventions: the "spindizzy," a kind of antigravity device that can lift entire cities into outer space at faster-than-light travel, and a drug that prevents aging, so that the inhabitants of those cities can travel in space for years without facing death.

 - The stories begin in the early 21st century, when Western civilization is devolving into a planet-wide dictatorship. The spindizzies provide a means for cities to escape the oppression and head out into the galaxy to, quite literally, find work.

 - The series portrays various colonies and civilizations at different stages of cyclical historical development. The book ends with the biggest cycle of all—the final collapse of the universe and the beginnings of a new universe—or, perhaps, several new universes.

Imagining Alternate Histories

- Another way of exploring theories of history is to play the "what-if" game of imagining how history might have turned out had it taken a different direction at key points in the past. This focus has grown into a substantial subgenre usually called *alternate history*.

- The L. Sprague de Camp novel mentioned earlier, *Lest Darkness Fall*, is an example of an alternate history, because the protagonist succeeds in preventing the Dark Ages, resulting in a different contemporary world. De Camp returned to the theme with a 1940 story called "The Wheels of If," which imagines what America might be like had it been settled much earlier by the Norse.

- Perhaps the most common turning point in history explored by this subgenre addresses the question: What if Germany had won World War II? The classic treatment of this theme is Philip K. Dick's 1962 masterpiece *The Man in the High Castle*, not only because of its chilling portrayal of a defeated United States partitioned between Nazi Germany and Japan, but because of the complex metafictional games Dick plays with the notion of alternate history itself.
 - Dick's hinge-point in history is the attempted assassination of President Franklin Roosevelt, which actually happened in 1934. Dick imagines that it succeeded, resulting in weak presidents who failed to alleviate the Great Depression and kept the country isolated from the war in Europe and the growing threat from Japan. Nazi Germany conquers Europe and the Soviet Union, and the Japanese attack on Pearl Harbor virtually wipes out the American fleet. The novel begins in 1960s America, with the Nazis ruling the eastern states; the Japanese, the western states; and a neutral buffer zone in the Rocky Mountain states.

 - But Dick is doing far more than playing a simple what-if game, and the novel is so full of disguises, frauds, and secret identities that it gradually becomes apparent that he's questioning the validity of any single perception of history or reality.

 - Indeed, reality slippage was one of Dick's dominant themes throughout his career, and no other writer of alternate history before him had gone so far in interrogating what alternate history might actually imply in terms of our own perceptions of what is and is not real.



The frightening prospect of a German victory in World War II has been explored in numerous alternate histories by both mainstream and science fiction authors.

In a way, Dick takes us back to the idea with which we began. All fiction—historical or science fiction, realistic or fantastic—involves some degree of slippage from reality and places us in a world wholly of the artist's creation. In the past few decades, even historians and philosophers have raised questions about how reliable the "facts" of history can be, given that we encounter them mostly through the narratives of others.

Readings

Asimov, *The Foundation Trilogy*.

Blish, *Cities in Flight*.

Dick, *The Man in the High Castle*.

Twain, *A Connecticut Yankee in King Arthur's Court*.

Willis, *Doomsday Book*.

Questions

1 From the writer's point of view, what is the advantage of having a character from the present or near future travel back to historical periods, rather than simply writing a historical novel in the first place?

2 When such writers as Isaac Asimov or James Blish make use of actual theories of historiography in depicting thousands of years of future history, do these thought experiments actually illuminate the way we think about broad historical developments, or do they oversimplify the complex forces that historians have described, or both?



LECTURE 4

Evolution and Deep Time in Science Fiction

When we think about our own futures, we tend to be optimistic, but our ideas about the future of the world can be much less sunny. Science fiction tries to bridge that gap by showing us real people in global or even cosmic futures. But note that the future itself is a culturally constructed concept and there are many ways of thinking about it. In this lecture, we'll talk about stories on the grandest possible scale, stories that can imaginatively take us from the beginning to the end of the universe. Along the way, we'll address the purely literary problem of how to tell such stories on a human level, rather than turning them into abstract philosophical essays.

Conception of Time

- Science fiction stories about the deep past or the deep future couldn't be told until these concepts entered the realm of scientific speculation. In earlier societies, the distant past and the distant future often were the realm of mythology or religion—creation and eschatological myths about end times.

- In the 17th century, by interpreting the Bible with a dogged literalness, an Irish bishop named James Ussher concluded that the world could have been created no earlier than 4004 B.C.

- By the 19th century, our idea of time as a scientific concept began to expand rapidly, largely on the basis of two books: Charles Lyell's *Principles of Geology* and Charles Darwin's *On the Origin of Species*. By suggesting that the physical world and the life on it could best

be explained by processes involving millions of years, these books extended the notion of what the deep past really meant and, by extension, what the deep future might hold.

Olaf Stapledon

- The writer Olaf Stapledon was trained as a historian and philosopher, but he is remembered almost entirely for a series of astonishing works of fiction that proved to be enormously influential on later science fiction writers, as well as literary writers and scientists.

- The first of these, *Last and First Men*, appeared in 1930, and a glance at Stapledon's accompanying timeline gives us a sense of the scope of his ambition. It starts with the formation of the planets, which Stapledon took to be 2 billion years ago, and includes the first appearance of life on Earth, with "today" (around 2000 A.D.) appearing about halfway through.

- Stapledon's narrative describes some 18 successive species of humanity, taking us through such evolutionary changes as the Great Brains, a migration to Venus, the Flying Men, and a migration to Neptune, together with a few periods of "eclipse" or "fluctuation." These all take place before the appearance of the Last Men more than 1.5 billion years in the future and, finally, "the end of man" some 2 billion years from now.

- *Last and First Men* is narrated by one of the Last Men, who has somehow, from the distant future, "seized the docile but scarcely adequate brain of your contemporary," a narrator who thinks he is writing a work of fiction. The Last Man tells us that he wants to communicate this story because "we can help you, and we need your help."

- After ranging throughout the cosmos for 2 billion years, we finally find out what the narrator means. The Last Men have discovered that the Sun will soon expand into a nova and that they will not be safe from destruction even from their refuge on Neptune.

- As the growing solar radiation debilitates their minds and bodies, they decide to create microscopic seeds to carry the germ of humanity out into the galaxy. Because they can no longer summon the energy to undertake such an ambitious project, they are visiting minds of the distant past to "learn over again that other supreme achievement of the spirit, loyalty to the forces of life embattled against the forces of death."

- Thus, even though the novel ends on a tragic and elegiac note, it leaves room for us, with our "primitive zeal," to participate in the final fate of the cosmos.

Star Maker, which appeared in 1937, is set on a timescale that dwarfs that of *Last and First Men*, beginning with the creation of the cosmos and ending with "complete physical quiescence" trillions of years in the future. Yet for all its astonishing ambition, many readers find *Star Maker* to be a more congenial novel than *Last and First Men* because it follows a single contemporary human narrator throughout.

Olaf Stapledon's *Star Maker* became a reference book for ideas among later science fiction writers, with its galactic empires, intelligent stars, artificial planets, various kinds of alien civilizations, telepathic races, and more.



- The novel beings with the narrator wandering onto a starry hilltop near his suburban home; while contemplating the night sky, he finds his consciousness drawn out of our solar system to a planet much like ours that he calls the Other Earth. He then makes a friend on this other world, a philosopher named Bvalltu.

- The two of them join minds and wander throughout all space and time, joining with more minds as they encounter a huge variety of civilizations. Eventually, this cosmic mind of which the narrator is a part manages to come in contact with the Star Maker itself, who shows them "the birth of the cosmos," described in terms very much like the big bang, although the language can be fairly biblical in tone.

Writers in the Stapledon Tradition

- Arthur C. Clarke, who regarded *Star Maker* as the finest science fiction novel ever written, was perhaps Stapledon's earliest and most serious disciple. His first novel, *Against the Fall of Night* (rewritten under the title *The City and the Stars* in 1956) clearly shows that he wants to work in "Stapledonian" timescales.
 - The novel begins a billion years in the future in a city called Diaspar, which believes itself to be the last city on a largely deserted Earth. A young man named Alvin, the first child born in Diaspar in millions of years, sets out to find out what happened to everyone else on Earth.

 - Alvin's quest leads him to discover not only another community on Earth but an ancient survivor of a galactic empire; an interstellar spaceship; a vast, disembodied intelligence named Vanamonde who can travel anywhere in space and time; and another vast intelligence, the Mad Mind, who has gone insane.

- Clarke's original novel, *Against the Fall of Night*, became the basis for a sequel written by another Stapledonian author, Gregory Benford, an astrophysicist on the faculty of the University of California at Irvine.

Although this sequel, *Beyond the Fall of Night*, is not one of Benford's major works, he contributed significantly to this tradition in a series of six novels that he collectively called the Galactic Center Saga.

- The first novel, *In the Ocean of Night*, is a prelude to the larger series. In the near future, a British astronaut named Nigel Walmsley encounters an alien vessel nicknamed the Snark, which tells him of vast machine civilizations that long outlast their organic creators.

- After a second novel, *Across the Sea of Suns*, the series moves into Stapledonian territory with *Great Sky River*. The story leaps forward tens of thousands of years, after humans have colonized other star systems around the galaxy. We are introduced to the Bishop family, post-humans with various cybernetic and mechanical enhancements, who are trying to survive on a world dominated by the machines, whom they call Mechs.

- *Tides of Light* and *Furious Gulf* continue the tale of the Bishop family trying to escape the Mechs. With *Sailing Bright Eternity*, Benford brings this family together with Walmsley, who now finds himself 37,000 years in the future. Their task, of course, is to find some way to outwit the Mechs before they wipe out humanity altogether and, in so doing, perhaps find the true purpose of humanity.

- What Benford brings to the table is a way of addressing what we might call the "Stapledon problem"—namely, how do you make a human-scaled story out of all the mind-blowing vistas of deep space and time that Stapledon invites us to ponder? Benford's novels try to bring these vast themes down to a recognizable level of family relationships and anxieties. In effect, Benford tries to unite the novel of character with the massive themes of the Stapledonian cosmos; at his best, he succeeds as well as anyone.

- Probably the most direct modern heir of Stapledon is the prolific British novelist Stephen Baxter. In 2002, he published a novel that is, in many ways, his version of *Last and First Men*. Titled simply *Evolution*, it aims to do nothing less than dramatize the entire Darwinian pageant of life on Earth through a series of stories that range from 145 million years in the

past to 500 million years in the future. Unlike Stapledon, Baxter gives us point-of-view characters, although for obvious practical reasons, many of these viewpoints are not human.

» In the chapters set 65 million years ago, for example, we follow a tiny rodent-like mammal named Purga, a distant ancestor of humanity who witnesses the meteor strike that wipes out the dinosaurs. Some 30 million years later, our main figure is Roamer, a monkey-like creature who gets trapped on a natural raft and floats from Africa to the Americas. Still later, only about 65,000 years ago, a humanoid character named Mother stands in for much of the development of modern consciousness.

» As we move further into the future, the novel sounds fairly pessimistic. Thirty million years from now, rats have all but inherited the Earth, and humans are once again hiding out in small enclaves. Finally, as the Earth is dying some half-billion years from now, we meet another scruffy creature named Ultimate, not all that different from the Purga we met in the beginning, as though some sort of grand cycle has been completed.

» As ambitious as this novel is, it pales in comparison to Baxter's Xeelee Sequence, which consists of nine novels and several short stories and novellas detailing human and post-human encounters with various alien civilizations. It expands to include struggles for cosmic superiority that began nearly 14 billion years ago and conclude some 5 billion years in the future. The three novels *Timelike Infinity*, *Flux*, and *Ring* are classic examples of hard science fiction in their speculative physics and cosmology.

» For inveterate science fiction readers, there is something romantic and haunting about Baxter's enormous numbers, even though—or maybe because—there is nothing in human experience that can enable us to fully understand them. But if the goal of science fiction is to enlarge our imaginations, to create a genuine sense of wonder, then these explorations into deep time and distant space are among the purest examples of how science fiction achieves its effects.

Readings

Baxter, *Evolution.*

Benford, *In the Ocean of Night.*

Stapledon, *Last and First Men.*

——, *Star Maker.*

Wells, *The Time Machine.*

Wolfe, *The Book of the New Sun.*

Questions

1 For many readers, much of the appeal of science fiction lies in imagining what the future will look like for ourselves and our children. But what intellectual or emotional concerns can be addressed by fiction from such writers as Olaf Stapledon or Stephen Baxter that may take us thousands or millions of years beyond our own experience?

2 Some critics and writers have made a distinction between far-future science fiction and "visionary literature." What, if any, is the real distinction between the two? Does such science fiction represent the secularization of what we might otherwise view as religious vision?

LECTURE 5

Utopian Dreams and Dystopian Nightmares

Utopian thinking is so widespread that we might suspect it's an almost universal impulse of human thought. Put simply, this impulse can be framed in two questions, which almost everyone asks at some point. First, can our lives be better? Can we have a better society and economy; a livelier culture; a superior, more rewarding way of living? And if we believe that's possible, how can we achieve it? The second question is the inverse of the first: Can our lives be worse? And if we believe that's a possibility, what should we do to avoid it? Both of these visions involve dreams of the future, and as such, they traffic in much the same territory as science fiction.

Ursula K. Le Guin

- In a story entitled "The Ones Who Walk away from Omelas," by Ursula K. Le Guin, Omelas is an almost ideal utopian city. Everyone there is joyous, and the narrator assures us that these are not naïve simpletons but genuinely happy, mature, passionate people. They live in a society without kings or slaves, without economic inequality, without weapons, without stock markets, probably without much technology, but with a great deal of art and celebration.

- There's only one catch: Locked in the basement of one of Omelas's public buildings is a small, half-starved child in utter misery, and somehow the happiness of the city completely depends on this child's continuing mistreatment and deprivation. Everyone knows the child is there, and some of the inhabitants of Omelas react with tears or rage when they

first learn of the situation. But most come to realize that "to exchange all the goodness and grace of every life in Omelas for that single, small improvement: to throw away the happiness of thousands for the chance of the happiness of one" would be a source of even greater guilt.

- Most residents of Omelas come to terms with the injustice, although the occasional adolescent or adult simply leaves after viewing the child. The narrator tells us that the place they go is even less imaginable than Omelas and may not even exist, but the closing line of the story says, "They seem to know where they are going, the ones who walk away from Omelas."

- Le Guin's brief story is clearly a critique of the idea of utopia and of the compromises that might be required to achieve such an ideal society. She borrowed the central idea from the American philosopher William James. Like Le Guin, James was suspicious of the very idea of utopia—or at least of the idea of a utopia without costs; this suspicion also characterizes the response that many science fiction writers have had to the idea.

- A critic named Tom Moylan used the term *critical utopias* to describe works that show "awareness of the limitations of the utopian tradition" and "reject utopia as a blueprint while preserving it as a dream." Moylan's term gives us a good idea of science fiction's skeptical and sometimes problematic relationship to the tradition of utopian writing.

Utopian Fiction

- The word *dystopia* was probably coined by the British philosopher John Stuart Mill in a speech before Parliament in 1868. He, in turn, was making a deliberate play on the word *utopia*, coined by Sir Thomas More for his 1516 work with that title. More pieced together the word from the Greek *topos* ("place") and the prefix *ou-* ("not"); thus, the word means "noplace."



We define utopian societies as those that are achievable and dystopian as those that are avoidable; under those conditions, stories of zombie uprisings aren't true dystopias.

- In his work, More is told about the island state of Utopia by an adventurer named Raphael Hythloday ("someone who spouts nonsense"), who claims to have been on the voyages of Amerigo Vespucci to the New World. For this reason, it seems likely that the island itself is part of the New World.
 - » Although the book is clearly meant as a commentary on the failings of British and European society and a proposal for a more rational, humanistic way of living, More's description of Utopia includes a level of practical detail that is rarely seen in earlier works; he discusses an efficient system of sewage disposal, for example, and universal healthcare.

 - » Even though principally intended as a work of social philosophy, *Utopia* includes a good deal of the sort of invention that would later become common among science fiction writers.

- In the centuries after More, utopian fictions and proposals appeared with some regularity, but not all are particularly relevant to modern science fiction. Probably the most important before the 19th century was Sir Francis Bacon's unfinished *The New Atlantis*. Bacon himself was an unapologetic advocate for the newly emerging scientific method of observation, experimentation, and deduction.



Sir Francis Bacon

 - Like More's *Utopia*, *The New Atlantis* takes us to an undiscovered island in the South Seas. The country of Bensalem and, in particular, its central institution, Salomon's House, are devoted to the idea of scientific discovery; some have even described the setting as an early model of the modern research university.

 - The novel also has a few of what, in retrospect, seem startlingly predictive technologies, such as what we now call automobiles, airplanes, submarines, anesthetics, and radio communication—all achieved through scientific and technological research rather than magic.



- The next few centuries saw an explosion of utopian works. Among these was the enormously successful *Looking Backward: 2000–1887* by the American lawyer and writer Edward Bellamy. Others who tried their hand at utopias included urban realist writers, such as William Dean Howells with *A Traveler from Altruria*; mystical writers, such as W. H. Hudson with *A Crystal Age*; other socialist writers, including William Morris; and academic novelists, including Robert Herrick with *Sometime*.

- With the rising tide of demand for women's rights, there were plenty of feminist utopias, as well, from Mary E. Bradley Lane's *Mizora* (1890) to Lady Florence Dixie's *Gloriana, or the Revolution of 1900* (1890). Probably the best of these was *Herland*, published in 1915 by Charlotte Perkins Gilman, depicting a peaceful all-female society that has learned to maintain the population through parthenogenetic birth.

Dystopian Fiction

- Some scholars have noted that sometime around 1914 to 1920, the boom in utopian writing began to fade, and the boom in dystopian writing began to appear. It seems a bit oversimplified to say that before World War I, it was easier to believe in utopia, while after that horrifying war, dystopia became more the norm. In fact, a number of factors probably contributed to the shift, including fears of mechanization, conformity, and the growing influence of businesses and corporations in daily life.

- One of the first recognizable dystopias in the modern sense came from the beloved American author Jack London. London was also a committed socialist, and his 1908 novel *The Iron Heel* depicts a future in which the super-wealthy "robber barons" impose a brutal tyranny on the United States until they are overthrown by revolution.

- In England, a remarkable early dystopia came from another writer not often associated with fantastic literature: E. M. Forster. His 1909 story "The Machine Stops" describes a future in which almost everyone lives isolated in a sanitized underground environment, communicating only by a kind of

videoconferencing and sustained by an immense worldwide machine that provides sustenance, light, and air—until it begins to break down.

- These stories preceded the Great War and focused on anxieties already building up before that cataclysmic event dealt a lasting blow to idealism. Another event that almost certainly influenced dystopian writing was the Russian Revolution in 1917; indeed, one of the most strongly influential of all dystopian novels, *We*, was written by a Russian, Yevgeny Zamyatin. The book is set in a far future in which the One State has created a nightmare society; names are replaced with numbers; everyone is constantly monitored by the Bureau of Guardians; and even sex is closely regulated.

- Less than a year after writing a review of a French translation of Zamyatin's novel, George Orwell began writing *Nineteen Eighty-Four*, probably still the most famous dystopia of all. Orwell brought Zamyatin's terrors closer to home by setting his novel not 1,000 years in the future but only 36 years away.
 - Orwell's country, Airstrip One, is recognizably a future England, and his central character, Winston Smith, seems far more of an everyman than Zamyatin's more abstract protagonist, called D-503.

 - Perhaps more important, Orwell invents little in the way of new science fictional technology; most of what surrounds Winston in his daily life resembled what Londoners could already see around them in the late 1940s.

- In the aftermath of *We*, many other writers took up dystopias. Sinclair Lewis published *It Can't Happen Here* in 1935, about the rise of a totalitarian dictator in the United States. Only two years later, the British writer Katharine Burdekin (writing under the pseudonym Murray Constantine) published *Swastika Night*, describing in terrifying terms what Hitler's promised "Thousand Year Reich" might actually look like. Even the controversial philosopher-novelist Ayn Rand got into the act with her 1938 *Anthem*, set in a world in which individualism is suppressed and what she called collectivism is the rule of law.

- By the mid-20th century, science fiction itself had started to come of age and to appear in novel form rather than predominantly short stories. And science fiction writers would inevitably join this discussion, seeing the roots of possible dystopias all around them. Vonnegut's *Player Piano* asked: What if automation took over our lives? Frederik Pohl and C. M. Kornbluth's *The Space Merchants* explored what the world would be like if it was taken over by advertising agencies. And Anthony Burgess's *A Clockwork Orange* envisioned a society in which violent youth gangs terrorized everyone.

- The most recent trend in dystopian literature is the manner in which it has invaded young adult fiction. This almost certainly has something to do with the enormous success of Suzanne Collins's 2008 novel *The Hunger Games*, its sequels, and the popular movies made from them. Other young adult dystopias include Scott Westerfeld's series that began with the novel *Uglies*, Veronica Roth's Divergent series, Ernest Cline's *Ready Player One*, and James Dashner's *The Maze Runner*.
 - » Psychologists, sociologists, and cultural commentators have spilled a great deal of ink speculating on what all this tells us about today's young people. Have they become so cynical about their own futures that dystopias are the only worlds with which they can identify?

 - » Although some of these young adult novels may lack depth in terms of characterization, grace in terms of style, or credibility in terms of the futures they portray, they all take place in worlds that provide opportunities for individual heroic action. And given that most of their readers don't live in such a world, they may relish the vicarious challenge that such fiction offers.

Readings

Atwood, *The Handmaid's Tale*.

Bradbury, *Fahrenheit 451*.

Le Guin, "The Ones Who Walk away from Omelas."

More, *Utopia*.

Orwell, *Nineteen Eighty-Four*.

Zamyatin, *We*.

Questions

1 Utopian works were consistently popular in the late 19th and early 20th centuries, but in recent decades, the darker dystopian vision has seemed to predominate. Why? Is there some relationship between the anxieties of our own time and the kinds of futures we imagine?

2 With such novels and movies as *The Hunger Games* and *Maze Runner*, post-apocalyptic or dystopian literature has recently become an enormously popular theme in young adult literature. What are some of the reasons that young readers might be attracted to such dark themes?



LECTURE 6

The Rise of the Science Fiction Pulps

The term *pulp fiction* has become shorthand for the kind of sensational, violent, dialogue-heavy action stories that were published in popular magazines from the 1920s into the 1950s. Such legendary crime magazines as *Black Mask* featured early work by Dashiell Hammett and Raymond Chandler. At the same time, some of the great writers of science fiction, from Heinlein and Asimov to Bradbury, Sturgeon, Leigh Brackett, A. E. Van Vogt, and others, also published their work in pulp magazines. In this lecture, we'll explore the pulp era of science fiction to discover why these cheap magazines became the major outlet for American science fiction for nearly 30 years.

The Emergence of Mass-Market Fiction

- Two key factors in the early 19th century contributed to the later popularity of cheap forms of literature, from penny dreadfuls and dime novels to pulp magazines and paperbacks. These were the rise of public education—and a resulting rise in literacy rates—and the invention of the high-speed rotary printing press in the 1840s. Urbanization, increases in leisure time, and even improved transportation were other factors that gave people more time for reading, and the demand for printed material soared in both England and the United States.

- As more cheap, sensational stories became popular among working-class youths, their availability, in turn, helped contribute to the rise in literacy. Eventually, this led to a demand for what we would now call mass-market popular fiction, with plenty of publishers and writers willing to meet that demand.

- In England, young men and boys made up a large part of the audience for these lurid stories, usually published as serials. We can guess from some of the most popular titles that the youths of the 1830s loved tales of murderers, werewolves, and vampires. Perhaps the most famous of the penny dreadfuls was *Varney the Vampire*, published in 1847, decades before Bram Stoker's *Dracula*.

- We don't find much in the way of science fiction in these penny dreadfuls, but when we turn to the rough equivalent in the United States—the dime novel—we begin to get at least glimmers. Most of the original dime novels were westerns, but as the field expanded, we begin to see such titles as *The Steam Man of the Prairies* by Edward Ellis (1868), featuring a robot-like figure.
 - A rival publisher commissioned a version of Ellis's work called *Frank Reade and His Steam Man of the Plains*, which gave rise to a popular series throughout the 1890s.



 - The stories featured not only mechanical men but airships, submarines, lost races, and new weapons. Although their insane plotting and blatant racism make them almost unreadable today, they constitute what is probably the first serial or periodical publication in America to be devoted largely to what we now call science fiction.

- The shift from dime novels to pulp magazines is credited largely to Frank Munsey, a New York publisher who, in 1882, took over a weekly children's magazine called *The Golden Argosy* and eventually transformed it into a monthly fiction magazine called *The Argosy*. Within a few years, his circulation was up to a half million copies monthly. Perhaps Munsey's

most lasting discovery was Edgar Rice Burroughs, whose first science fiction tale, *Under the Moons of Mars*, began to be serialized in another of Munsey's magazines in 1912, and whose first story about Tarzan was published by Munsey later that same year.

- The shift in subject matter from westerns to science fiction was probably already underway when Burroughs began writing. The frontier, which had been such a key feature of American popular fiction, was rapidly disappearing, and writers had begun looking for new frontiers—hence, the increasing number of stories about lost civilizations in unexplored parts of the world. But even the unexplored parts of the world were shrinking rapidly, and as new technologies, such as aircraft and rocketry, began to develop, ancient fantasies of traveling to outer space began to take on a new life.

Hugo Gernsback

- In 1915, Street and Smith—Munsey's main competitor—launched *Detective Story*, a pulp magazine featuring one particular kind of story. Within a decade, pulp magazines appeared specializing in westerns, love stories, sports stories, and—eventually—weird stories, a sort of catch-all category that included supernatural tales, horror stories, fantasies, and some science fiction.

- Many historians believe that the first issue of *Amazing Stories*, published in April 1926, marks the birth of science fiction as a clearly defined genre in the United States. Its editor and publisher was an ambitious immigrant from Luxembourg named Hugo Gernsback.
 - » Gernsback fancied himself something of an inventor, but he had more success importing radio parts and promoting the growing amateur craze for the homemade wireless. He began a mail order catalog called *Modern Electrics* in 1908 and soon started to include articles and fiction, most notably his own serial novel *Ralph 124C 41+*.

- In terms of style, characterization, plot, and just about all the qualities of good fiction, *Ralph 124C 41+* is almost unreadably awful. But Gernsback seemed to be a real believer in a technological utopia, and he described a surprising number of inventions that would later be realized, including radar, television, video phones, solar energy, synthetic foods, and voice identification technology.

- Of course, Gernsback's real contribution to science fiction was not his own writing but his discovery that there was a great deal of interest in the fiction he published in his electrical hobbyist magazines. Thus, in 1926, he launched the first science fiction magazine, *Amazing Stories*, prominently featuring on the cover of the first issue the names of science fiction pioneers Edgar Allan Poe, Jules Verne, and H. G. Wells.

- In addition to classic reprints, Gernsback featured some of the writers from the Munsey pulps, including Burroughs and A. Merritt, as well as Edmond Hamilton and newer writers, such as Jack Williamson. In fact, one might speculate that thanks to Gernsback's magazine, the idea of a career as a science fiction writer now became a distinct possibility, although many writers continued to contribute to a variety of pulp magazines.

- In terms of identifying trends in popular culture itself, it may be that Gernsback's most immediately influential stories were two that he published in the same issue in August 1928.
 - One of these, titled "Armageddon—2419 A.D.," was by a writer named Philip Francis Nowlan, who is little read today, but whose hero—Buck Rogers—would survive for decades in comic strips, movie serials, television shows, and even games.

 - The other was *The Skylark of Space* by Edward E. Smith. This work, together with the stories by Nowlan and Hamilton, gave rise to what would eventually be labeled *space opera*: galaxy-spanning melodramatic adventures that would give the field its reputation for both vaulting imagination and clichéd characters, outlandish plot developments, and mediocre prose.

- Although Gernsback invented the science fiction magazine in America and helped set the tone for much of the 1930s, he was a poor businessman and, by almost all accounts, a disreputable editor who paid criminally low rates. By 1929, his company was in bankruptcy, and he had lost control of *Amazing Stories*.

- By the mid-1930s, pulp magazines overall were a huge market, with something like 200 magazines enjoying a combined circulation estimated at 10 million per month. But the advent of World War II meant paper shortages, and this, along with competition from comic books, radio, and movies, spelled trouble. Many pulps were shut down, while others converted to digest-sized magazines. In 1939, yet another threat appeared: the mass-market paperback. Although many of the pulps survived into the 1950s, they were already declining during the war years.

Improvements in Science Fiction

- It's true that the pulp era contributed a great deal to the reputation of science fiction as a rather sleazy kind of writing, but at the same time, the period featured many classic stories that influenced the later development of science fiction and extended its literary reach. One of these was "The Martian Odyssey" by Stanley G. Weinbaum, which appeared in *Wonder Stories* in 1934.
 - The story concerns one of the first explorers of Mars, who encounters a colorful variety of life forms, including an intelligent birdlike creature named Tweel; a four-legged, barrel-shaped creature with a circle of eyes around its middle; and a few tentacled monsters.

 - Prior to Weinbaum, such tentacled creatures were generally the template for portraying alien life forms. Weinbaum's idea that aliens could be intelligent and helpful yet unfamiliar to our ways of thinking and reasoning was something of a revelation, and the story arguably changed the ways in which science fiction would view alien life forms.



Some of the early space operas still possess some nostalgic appeal for their sheer outlandishness; they also influenced writers of the so-called *new space operas* of the 1990s and 2000s.

- Another important story was Lester del Rey's "Helen O'Loy," which may have done for robots what Weinbaum's story did for aliens. Del Rey's sentimental story of a female household robot who develops emotions and falls in love with her owner is unenlightened in terms of gender roles but moving in the way that the robot disguises herself as a real human and artificially ages her features so that she appears to grow old with her "husband."

John W. Campbell, Jr.

- John W. Campbell, Jr., was another writer who contributed to the boom in space operas but also wrote a couple of stories that deservedly became classics. For example, "Twilight," which appeared in 1934, offers a haunting vision of a distant future, somewhat reminiscent of Wells's

The Time Machine. It was radically different from most other science fiction of the time and helped establish a more ruminative, philosophical view of humanity's purpose.

- Another of Campbell's stories was "Who Goes There?" Published in 1938, it describes a shape-shifting alien who could replicate the form of any living thing, threatening a group of scientists at a research station in Antarctica. The story later became the basis of three films: *The Thing from Another World* in 1951, *The Thing* in 1982, and *The Thing* again in 2011.

- Campbell's real influence, however, was not as a writer but an editor. In the fall of 1937, he was named editor of *Astounding Stories*, which had long been the chief rival of Gernsback's *Amazing Stories*. Although Campbell's influence didn't become fully apparent until 1938, he soon began shaping science fiction in a way no editor had before, discovering spectacular new authors, such as Robert A. Heinlein, Isaac Asimov, and A. E. Van Vogt. For decades after, many readers would continue to view Campbell's tenure at *Astounding* as the first golden age of American science fiction.

Readings

Ashley, *The Story of the Science Fiction Magazines*, vol. I.

Bleiler, *Science-Fiction: The Early Years*.

Burroughs, *A Princess of Mars*.

Smith, *The Skylark of Space*.

Questions

1 For the most part, stories published in the popular pulp magazines of the 1920s through the 1940s were regarded even by their authors as ephemeral, expected to last no longer than the shelf life of the current month's issues. Yet some of those stories have continued to be reprinted until today, pulp magazines are a major collectors' market, and a few writers are now regarded as important figures in literary history. Is there a connection between the manner in which a story is published and its literary value?

2 If the pulp magazines eventually died out because of competition from paperback books, television, and comic books, what is the modern equivalent of this mass of "pulp fiction"?



LECTURE 7

The Golden Age of Science Fiction Stories

As we saw in the last lecture, the pulp magazines that published science fiction were intended to be discarded as soon as they were read. Indeed, many of the pulp authors didn't expect their stories to last much beyond the month in which the issue appeared. That began to change after World War II, however, when some of the stories found homes in anthologies. These anthologies, in turn, made ephemeral pulp stories available to generations of new readers and, in the process, showed book publishers that science fiction could be a profitable category. Interestingly, a majority of the anthologized stories came from one magazine, *Astounding Science Fiction*. In this lecture, we'll see what made that magazine so special.

Astounding Science Fiction

- *Astounding Science Fiction* (originally, *Astounding Stories of Super-Science*) was a superior publication for a number of reasons. From the beginning, it paid better, and it had the advantage of a large distribution network. By the late 1930s, *Astounding* was the premier science fiction magazine of its time, attracting major writers under editor F. Orlin Tremaine. In 1937, when Tremaine moved on, he named as his successor the 27-year-old John W. Campbell, Jr.

- As editor, Campbell had specific ideas about what he wanted science fiction to be. He had a bachelor's degree in physics from Duke, and this instilled in him a deep respect for science and engineering and, perhaps more importantly, for the competence that could be derived from scientific reasoning.

- We should note that editors have been more important in the history of science fiction than in other genres, such as mysteries or romances. From the beginning of the pulp magazines into the 1950s, American science fiction was mostly a short story form, and the gatekeepers who chose those stories were the editors of the various magazines.
 - These editors vied for the best writers, and many magazines developed distinct personalities. Editors also worked with authors to develop certain kinds of stories.
 - Today, when the novel is the dominant form in just about all genres, we can follow a favorite writer easily, but during the pulp era, readers developed loyalties to magazines as much as to authors, and it was the editors who shaped those magazines.
 - For his part, Campbell set out to shift the emphasis in science fiction toward more realistic, finely textured futures and innovative but logically rigorous ideas.
 - During his tenure at *Astounding*, which lasted from 1937 to his death in 1971, Campbell introduced such major writers as Robert A. Heinlein, Isaac Asimov, Theodore Sturgeon, and A. E. Van Vogt.
- As with any editor who takes over an ongoing magazine, Campbell was faced with a number of stories already purchased and scheduled for publication; thus, it took a while for his own stamp to become apparent. For many readers and fans, the so-called golden age of the 1940s really began with the July 1939 issue of *Astounding*, which featured Isaac Asimov's first story, "Trends," as well as a novelette by A. E. Van Vogt and stories by Nelson S. Bond and Ross Rocklynne.

Campbell's Influence

- If we look at some of the stories from the early years of Campbell's *Astounding*, we can begin to see some of the important ways in which he, quite deliberately, began nudging science fiction writing into new directions. In brief, some of these directions are as follows:

- Developing more complex characters than the traditional space heroes and goofy scientists

- Promoting the notion of competence, knowledge, and problem solving over traditional heroics and brute strength, leading to what some have come to call the *competent man motif* in science fiction

- Presenting the setting as a "lived-in" world rather than a generic future and minimizing the clumps of exposition that characterized much earlier science fiction

- Ensuring that the science of the story should be accurate and defensible in terms of contemporary understandings of science and technology

- Exploring the social and economic effects of changes in the future, whether or not those changes result from particular new technologies

- Developing common future settings that could be used for multiple stories and could evolve over a series of stories.

- Not all these ideas were entirely new in terms of science fiction, but to a great extent, the pulps had grown formulaic and repetitive. Campbell insisted that the settings matter and that the plots should clearly relate to the science fictional premise of the story.

- For example, Asimov's first story, "Trends," was about the first rocket to the Moon, which was hardly a new idea by 1939. But Asimov, who had been reading some articles on social resistance to technological advances, imagined that evangelical churches might be so opposed to space exploration that they create a powerful political movement to limit scientific research and technological innovation. It was this social extrapolation, not the old-fashioned idea of a Moon rocket, that interested Asimov and Campbell.

- Consider, too, the competent man idea, which Heinlein probably did more to promote than any other writer. Heinlein's second story for *Astounding* was called "Misfit," a title that referred to his main character, a rural boy nicknamed Slipstick (an early slang term for a slide rule) because of his prodigious math skills.
 - Having little formal education, the boy finds getting a job difficult and signs on to a kind of militarized construction project on a mission to move an asteroid into a closer orbit so that it can be used as part of a space station.

 - The story gives us an early view of the valorization of competence, as the boy first calculates that the original explosive device designed to move the asteroid is too great and, later, performs calculations in his head when the navigational computer fails, saving the entire mission.

- A better Heinlein story and the first of his classics is "The Roads Must Roll," which appeared in 1940. By today's standards, much of the story is dated, but even so, it takes on unusual topics, such as labor relations and economic theory. Further, its central technological innovation presents an interesting idea.
 - Heinlein imagines a future in which, following a decade of massive traffic jams and fatal automobile accidents, petroleum is severely rationed except for military use. Transportation becomes the province of solar-powered moving roadways. The roads are large enough that entire businesses occupy them, and the economy is dependent on them.

 - But Heinlein doesn't explain all this up front. In keeping with that idea of immersing us in his world, he begins with a labor rally. As the story goes on, we discover that the chief engineer is the competent man, whose superior knowledge of the system enables him to outsmart the lower-level engineers who are threatening to strike.

» Thus, the story provides us with most of those characteristics that Campbell wanted for the stories he published: the immersive setting, the valorization of competence, a consideration of social and economic issues, and ideas based on real science and engineering.

Slan and "Vintage Season"

- Two stories from *Astounding* represent quite different approaches to science fiction from the stories of Heinlein or Asimov. The first of these is an odd novel called *Slan* by A. E. Van Vogt that was serialized in 1940.

A. E. Van Vogt's *Slan* created a sensation among readers of *Astounding Science Fiction*; the notion of a super-intelligent minority seemed to resonate with what fans wanted to think of themselves.



- *Slan* takes place in a high-tech totalitarian society some 1,500 years in the future. It begins with the 9-year-old Jommy Cross and his mother visiting a city called Centropolis. We learn that they're being hunted by the police because Jommy and his mother are *slans*, genetically superior mutants with much greater intelligence, strength, and stamina than normal humans. They are also telepathic, able to read minds and communicate mentally with each other.

- Jommy's mother is killed, but he manages to hide out, first under the protection of a greedy old lady who hopes to use his skills for her benefit. Later, he takes on increasingly improbable challenges and learns one shocking secret after another about the history of the slans and the repressive regime that wants to kill them.

- Given the fact that World War II was already underway in Europe and Hitler's death camps were being built even as the story was being written, it would be tempting to read Van Vogt's slans as analogues of European Jews, but at the same time, there's a disturbing sense that Van Vogt invites us to think of the slans themselves as a kind of master race.

- Another story from *Astounding* that represents Campbell's emphasis on character and tone was "Vintage Season," written by the husband-and-wife team C. L. Moore and Henry Kuttner.
 - The story concerns Oliver, a landlord in an unspecified city who rents an old house to three vacationers who insist on being there during the month of May. The visitors are beautiful, dressed in elegant clothes and speaking with mellifluous voices, but they seem strangely remote and decadent, and they refuse to explain their need visit at this particular time. One evening, they arrange a party for a group of equally strange visitors, and they all gather before the house's front windows as though waiting for something.

- Oliver learns that his tenants are, in fact, time travelers from the future, visiting various moments of history. They know that a meteor will strike on this night in May, creating a massive fire that will destroy the nearby city. From studying their own history, they know that this house will be spared the immediate destruction.

- Oliver also discovers that one of the visitors is a composer who wants to incorporate "certain forms of disaster" into his work. The visitors are, in fact, as decadent as Oliver suspected, treating the spectacle of the destroyed city as an aesthetic event before moving on to the next moment in history. They claim that the terms of their time travel prohibited them from warning anyone about the disaster and hint that the meteor strike was not the only event that drew them to this place and time.

- In what is sometimes called a *slingshot ending*—an ending that implies an entirely new, untold story—"Vintage Season" ends with this line: "The house was dynamited six days later, part of the futile attempt to halt the relentless spread of the Blue Death." It's up to us to imagine what the Blue Death might be.

- The story's focus on Oliver's growing realization of the true nature of his odd tenants, the carefully crafted prose with which it is told, and the implication that enormous disasters might be viewed as the materials for art all place it ahead of its time.

Readings

Ashley, *The Story of the Science Fiction Magazines*, vol. I.

Huntington, *Rationalizing Genius*.

Van Vogt, *Slan*.

Questions

1. What were the key elements that editor John W. Campbell, Jr., demanded from his writers that changed the nature of science fiction from its wildly inventive pulp magazine origins to the more cerebral works that evolved in the 1940s and 1950s?

2. What factors led Campbell to lose his dominant grip on the field in the 1950s and 1960s?



LECTURE 8

The Spaceship as a Science Fiction Icon

Of all the visual images that have come to be associated with science fiction, the most iconic and universally recognizable is the spaceship. When the first translation of Jules Verne's *From the Earth to the Moon* appeared in the 1860s, it prominently featured the image of a space capsule. Later, spaceships were a fixture on pulp magazine covers. By the time major publishers began lines of science fiction books, the spaceship often appeared on the spine of the dust jacket for easy identification. But when we look at its actual uses in science fiction, the spaceship turns out to be a considerably more complicated image than it may first appear. We'll explore that topic in this lecture.

Development of the Spaceship in Science Fiction

- The idea of a rocket-powered spaceship didn't really become common in science fiction until a few scientists and engineers began publishing serious proposals to use rocket propulsion as a means of traveling into space. That was really all science fiction writers needed, despite the fact that most of the first efforts at manned rocketry ended in disaster and the first actual rocket-powered manned spaceflight didn't happen until 1961.

- By then, serious science fiction writers had given a good deal of thought to the possible cultural meanings of spaceships. For example, the great French critic and literary theorist Roland Barthes wrote this about Jules Verne:

> The basic activity in Jules Verne ... is unquestionably that of appropriation. The image of the ship, so important in his mythology, in no way contradicts this. Quite the contrary: the ship may well be a symbol for departure; it is, at a deeper level, the emblem of closure. ... To like ships is first and foremost to like a house, a superlative one since it is unremittingly closed, and not at all vague sailings into the unknown: a ship is a habitat before being a means of transport. And sure enough, all the ships in Jules Verne are perfect cubby-holes.

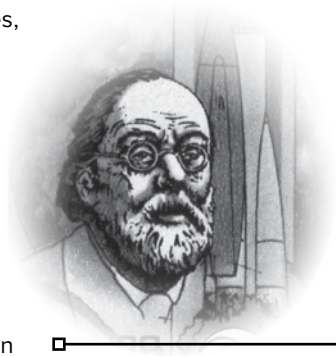
- To give credence to Barthes's "cubby-hole" remark, consider this description of the interior of the spacecraft from *Around the Moon*, Verne's sequel to *From the Earth to the Moon*:

> Could they have found a calmer or more peaceful spot to sleep in? On the Earth, houses, towns, cottages, and country feel every shock given to the exterior of the globe. On sea, the vessels rocked by the waves are still in motion; in the air, the balloon oscillates incessantly on the fluid strata of diverse densities. This projectile alone, floating in perfect space, in the midst of perfect silence, offered perfect repose.

- Very early on, science fiction writers realized the insight that Barthes made in his 1957 book: A spaceship is as much a habitat as a vehicle. Thus, comfortable space liners became a staple of the pulp magazine adventures.

- Once writers realized how truly enormous the distances in outer space are, it became clear that the spaceship would need to be a self-contained, internally sustainable society. And once Einstein showed that the speed of light seemed to be an absolute speed limit on space travel, it became clear that voyages even to nearby stars would take decades or even centuries. Such ideas as space warps, hyperspace, or later, wormholes, were largely inventions by writers, sometimes hung on the slenderest thread of physics theory, in order to get around this cosmic speed limit.

- Other writers, playing more by the rules, realized that interstellar spaceships might need to be developed that could sustain whole generations of crew members; this led to one of the more compelling and persistent ideas in science fiction: the generation starship. The idea was actually proposed by the Russian rocket pioneer Konstantin Tsiolkovsky and began showing up in pulp stories in the 1930s.



Konstantin Tsiolkovsky

Heinlein's "Universe"

- Probably the first masterpiece on the generation-spaceship theme was Robert A. Heinlein's story "Universe," which appeared in *Astounding Science Fiction* in 1941, with a sequel a few months later. Both stories were published as a novel titled *Orphans of the Sky* in 1963. "Universe" showcases Heinlein's ability to turn an idea that could easily have been a gimmick it into a haunting tale that resonates with ideas about society and social evolution, religion, and the history of science itself.

- "Universe" is also a good example of a science fiction narrative technique pioneered by Heinlein and now used by most science fiction writers. Instead of providing us with any background material, "Universe" opens with a dramatic action scene, offering us a series of unexplained references that we must piece together ourselves to figure out details about the setting and characters. More arcane references follow, some implying an entire culture with which we aren't familiar.
 - » Eventually, Heinlein leads us to realize that the hero of the story, Hugh Hoyland, and his companion are on an enormous ship where the upper decks have lower gravity and are inhabited by mutants who live in exile as the result of some earlier catastrophe.

- So many generations have lived and died on this giant spaceship that no one remembers the initial mission or even that it's a spaceship at all; to them, it's not a vessel moving through space but the entire universe, and the mechanisms that have automatically kept the world sustainable have become dogmatic rituals, a form of almost religious transubstantiation.

- Even to question this dogma is to risk charges of heresy—and that is exactly what Hugh faces after he's captured by a "mutie" and shown the "Main Control Room," where a planetarium-like projection shows him the real universe of stars and planets outside the ship. It's apparently the first time anyone in Hugh's culture has seen the actual night sky in generations, and it convinces Hugh that the ship is not the universe but is moving through a much larger universe.

- We eventually piece together the backstory of a mission to a nearby star initially planned to last 60 years. After a mutiny and disaster, the original mission was forgotten and the scientific documents outlining it have been turned into purely metaphorical religious texts.

- In short, Heinlein had found a use for the spaceship that is, in effect, the ultimate example of Barthes's notion of the ship as an "emblem of closure"—not merely a comfortable cubby-hole or drawing room but the entire world or, in the degraded view of the ship's inhabitants, the entire universe.

Ever-Larger Spaceships

- Heinlein had also stumbled on a plot that later science fiction writers simply would not let go of. Among those who addressed the starship as a universe was Brian W. Aldiss in *Non-Stop*, Clifford Simak in "Target Generation," and Chad Oliver in "Stardust."

- One of the most imaginative variations is Harry Harrison's 1969 novel *Captive Universe*. For the first several chapters, we seem to be reading a historical account of a young Aztec villager. We later realize that the valley in which he lives is part of a giant ship that has been deliberately divided into two cultures, one based on Aztec society and the other on medieval monasticism. The generation ship here becomes an elaborate and lunatic experiment in both social and genetic engineering.

- Other writers upped the ante even further. James Blish wrote a series of novels in the 1950s in which entire cities from Earth are launched into space with the aid of antigravity devices. In "The Burning of the Brain," Cordwainer Smith invented a kind of hyperspace travel that permitted residents of a giant starship to seem as though they were relaxing on George Washington's Mount Vernon estate. Gene Wolfe featured a generation starship dotted with medieval-like city-states in his Book of the Long Sun series.

- More recently, Kim Stanley Robinson undertook a detailed and well-reasoned critique of the generation-starship concept in his novel *Aurora*, which begins 159 years into a 170-year-long voyage that began in the year 2545. The ship itself—which we soon learn is the narrator of the book—now has a population of just over 2,000.
 - Over the course of the journey, bacteria, viruses, and molds have mutated on the ship, and it has become dirty and difficult to maintain. Some of the younger passengers born on the ship condemn their elders for having effectively sentenced them to a life in prison before they were even born.

 - *Aurora* is perhaps the most thoughtful, well-researched, and skeptical generation-starship novel of recent years.

- Robert Reed has written a series of novels and stories about what he calls the Great Ship—a fantastically huge ship the size of the planet Jupiter. Abandoned by its unknown builders, by the time of Reed's novel *Marrow* (2000), the ship has become home to more than 100 billion passengers, human and aliens, in all sorts of different environments



The idea of the generation starship was invented by early science fiction writers to address the problems with interstellar travel introduced by Einstein's observations about the speed of light.

and cultures. Essentially, Reed has invented a setting so massive that it can conveniently serve as a kind of story machine for a series of very different tales linked together by a common cosmology.

Small-Scale Spaceship Concepts

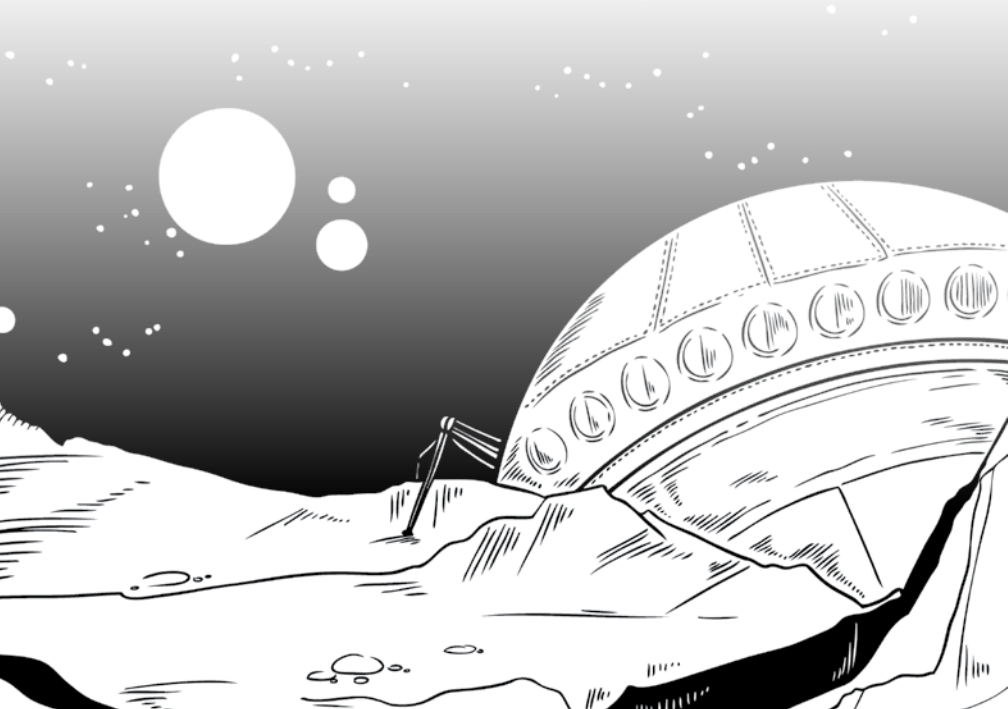
- But as the spaceships in some tales became larger, other writers developed more intimate ideas of spaceships. Anne McCaffrey's *The Ship Who Sang* features a spaceship that is the outward personality of a single mind, in this case, a woman named Helva.

- Frank Herbert's novel *Destination: Void* (1966) features a similar idea—spaceships managed by Organic Mental Cores, or essentially human brains, though Herbert suggests that such brains might fail on a regular basis, forcing the ship's crew to design an artificial intelligence to run the ship.

- In another of Cordwainer Smith's bizarre stories, "The Game of Rat and Dragon," the brains of cats are wired into spaceships, where they establish a mental link with the pilots in order to develop the instant reflexes needed to challenge the dangers of spaceflight. Their particular dangers are strange life forms in deep space that appear to the humans as dragons and to the cats as rats.

Summing Up Spaceships

- The spaceship has been a useful tool for science fiction writers for more than 150 years, serving as a means of preserving comfortable middle-class values in a hostile and alien environment, as a microcosm of society and a laboratory for exploring how societies devolve and forget



their origins without new ideas and stimuli, as a reflection of the styles and preoccupations of the society that imagines them, even as a kind of horror-story haunted house.

- Few images have been more iconic of science fiction itself than the spaceship or more useful to writers who seek not only to convey the sheer wonder of the universe but to explore the problems of a sustainable society in an environment of limited resources.

Readings

Blish, *Cities in Flight*.

Heinlein, *Orphans of the Sky*.

Robinson, *Aurora*.

Verne, *From the Earth to the Moon*.

Wolfe, *The Book of the New Sun.*

Questions

1 Sometimes key images in science fiction take on not a practical value—how to get from planet to planet, in the case of the spaceship—but also a metaphorical meaning for readers who view them as somehow encapsulating what science fiction is all about. What are the major sources of this metaphorical power in the image of the spaceship?

2 The generation-starship tale, in which a space voyage may last for centuries, provides authors with an opportunity to speculate on both the mechanics of space travel and the question of how to develop a sustainable society within a closed environment. What can such stories tell us about the nature of social organization and stratification in a world of measurably limited resources?

LECTURE 9

The Robot: From Čapek to Asimov



As we've seen, science fiction often deals in ideas, but in the popular imagination, these ideas may be condensed into familiar images or icons. Of course, one such icon is the robot, a classic emblem of the imaginative shadowland occupied by science fiction between the known and the unknown, the organic and the mechanical, the human and the Other. The robot is our servant in exploring mysterious worlds, but it is also a mysterious world in itself; indeed, the day may come when its workings are no longer understood even by its creators. In short, it is a classic and compelling image that embodies the conflicting hopes and fears that seem to be constantly in dialogue in science fiction.

Origins of the Robot Idea

- As with many science fiction icons, the image of the robot predates its uses in science fiction. Greek mythology gave us the legendary Talos, a giant made of bronze to protect the island of Crete. And medieval Jewish lore gave us the notion of the *golem*, a humanlike figure made of clay that could be brought to life.
 - In the 18th century, human-shaped automatons were constructed that could play the flute, draw preprogrammed pictures, and write out poems. Such figures, of course, would eventually work their way into fiction.

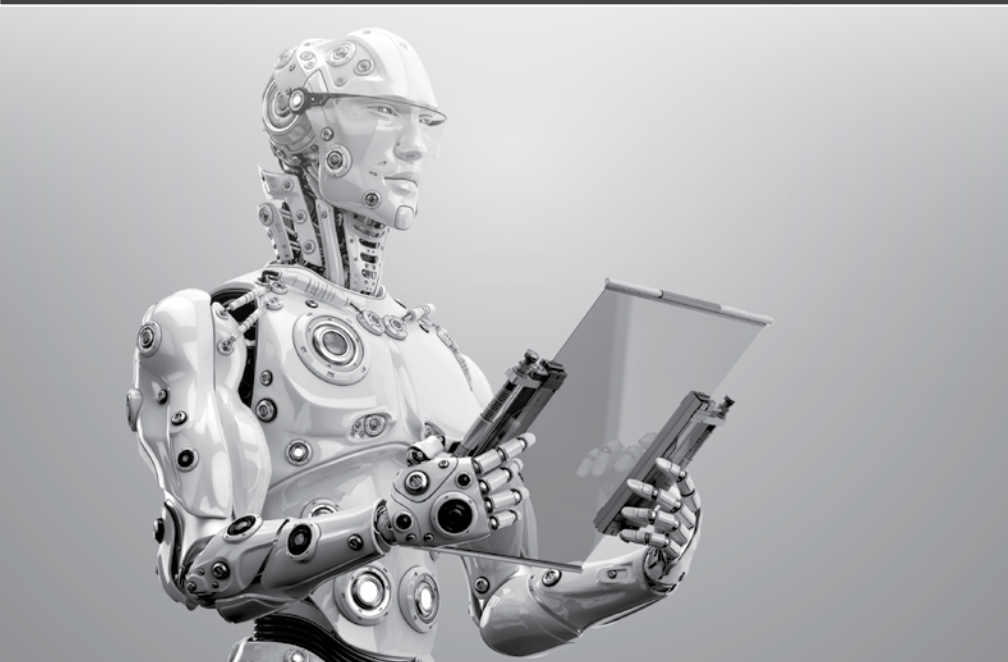
 - By the 19th century, steam power had become a reality and was added to the arsenal of imaginary technology. In 1868, an inventor named Zadoc Dederick received a patent for a mechanical "steam man"

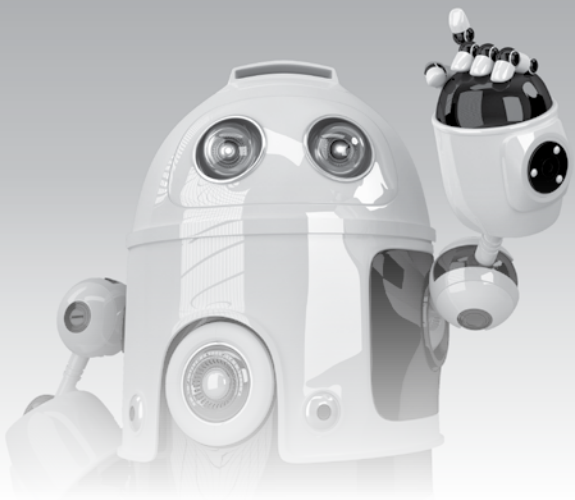
designed to pull a carriage. Within months, Edward Ellis featured a similar machine in his dime novel *The Steam Man of the Prairies*.

- The modern notion of the robot—and the origin of the word itself—came from the Czech playwright and novelist Karel Čapek. His 1920 play *R.U.R. (Rossum's Universal Robots),* is one of the classics of European science fiction. Čapek adapted the word *robot* from an old Czech word referring to forced labor. His robots were not mechanical but, rather, organic beings assembled in a factory from living parts grown at Rossum's factory.

- Almost as important as giving the world the word *robot*, *R.U.R.* helped establish one of the basic outlines for robot stories. Rossum's robots provide such a universal source of cheap labor that the economy becomes dependent on them, but eventually, they become so advanced that they stage a revolt, storming Rossum's factory and killing all but one of the humans.

With the robot, we see ourselves reflected in the products of our own technology.





Evolution of the Robot

- After Čapek gave us the word and idea, science fiction writers readily adopted robots. In 1927, the first movie robot appeared in Fritz Lang's classic dystopian film *Metropolis*. In 1929, one story had college football players replaced by robots, and another had a mad scientist send his robots to commit terrorist crimes in the world's major cities. Giant robot police appeared as early as 1930, and several stories featured robot soldiers, but the most obvious use of this relatively new concept came in such areas as nursing or domestic help.

- Most of these stories are pretty bad, but a few became early classics. One is "Helen O'Loy," published in 1938 by Lester del Rey. The title figure is a robot designed mostly for cooking and cleaning; her name is a not-very-subtle pun referring to metal alloys. Two friends figure out a way to modify her to behave more like a fully rounded human, and she soon develops emotions and falls in love with one of them. They live together in a disguised marriage—no one knows she's a robot—until the husband dies, after which Helen asks his friend to destroy her framework and bury her alongside him.

- Another story, published in 1944, was actually far superior not only in terms of style, character, and psychological insight but also in its consideration of gender issues and the question of what is and is not a robot. This is the novella "No Woman Born" by Catherine Moore, who wrote under the name C. L. Moore.
 - The story describes a beautiful singer and dancer named Deirdre who is badly burned in a theater fire. Her brain, however, remains uninjured, and a brilliant scientist is able to transplant it into a mechanical body of extraordinary grace and suppleness. She makes a spectacular comeback, but throughout the story, the question is raised as to whether she is a robot or a woman with what we might now call a full-body prosthetic.

 - The story revolves around the classic mind-body problem, but by casting it in terms of how men relate to women and how women see themselves, it can be viewed as an early classic of feminist science fiction.

- Moore's idea of a machine-human hybrid or a mechanical body controlled by a single human brain remains an important tradition in science fiction. The contemporary writer John Scalzi, in his novel *Lock In*, imagined robot-like surrogate bodies remotely controlled by victims of a plague that caused their bodies to "lock in" to full paralysis. In Scalzi's novel, these beings contain no organic parts, yet each is controlled by a single human brain at a distance.

The Three Laws of Robotics and the Prime Directive

- Probably the most famous robots in science fiction are those invented by Isaac Asimov in a series of stories and novels that he published from 1940 to 1985. Asimov was well aware of the long science fiction tradition of the creation turning against its creator, but he sought to show that such fears are unfounded and that a carefully managed technology could ultimately work to humanity's benefit.

- Together with John W. Campbell, Jr., Asimov tried to alleviate fears of robot uprisings by coming up with the Three Laws of Robotics. Essentially programming rules, the three laws are:
 - A robot may not injure a human being or, through inaction, allow a human being to come to harm.
 - A robot must obey the orders given to it by human beings, except where such orders would conflict with the First Law.
 - A robot must protect its own existence as long as such protection does not conflict with the First or Second Law.



Isaac Asimov

- This is really a rather clever logical trap, with each law overruling the one below it. The idea was to set up a system of simple rules that would prevent, for example, someone using a robot to commit murder or go on destructive rampages, such as those featured in some of the early pulp stories. But Asimov soon realized that the laws were a kind of story machine, one that could generate clever plots by simply playing with the logical conundrums that the rules might permit.

- In the story "Evidence," for example, a lawyer named Byerly is severely injured in an auto accident and, after a long recovery, decides to run for mayor. His opponents, however, contend that the candidate is not the real Byerly but, rather, a cleverly programmed robot replica. A famous robot psychologist is brought in, who argues that disobeying the laws of robotics would prove that Byerly is human. But of course, obeying the laws proves nothing because any human could choose to do so. At the end of the story, the question of Byerly's identity remains open.

- In the 1950s, Asimov wrote two science fiction mysteries, *The Naked Sun* and *The Caves of Steel*, in which a human detective is partnered with a brilliant robot. By this time, robots are indistinguishable from humans, except that they must obey the laws of robotics. In other words, they are indistinguishable from very moral and responsible humans, incapable of many of the kinds of crimes that plague humanity.

- Not surprisingly, other science fiction writers also played with the implications of the laws of robotics. The veteran writer Jack Williamson, in a 1947 story titled "With Folded Hands," came up with his own version of the laws, which he called the Prime Directive: "to serve and obey, and guard men from harm."
 - This law governs the super-efficient "mechanicals" that have taken over menial tasks and such jobs as police officers and bank tellers. The mechanicals take the rule "to guard men from harm" far more literally than anyone had expected. Any toys that could be dangerous are taken away from children; all alcohol, tobacco, or unhealthy foods are eliminated; and so on.

 - In the nightmare society that results, humanity has nothing to do but to sit, as the title says, with folded hands, meekly obeying the mechanicals who were originally designed to protect them.

Attitudes toward Robots

- With Čapek, Asimov, and Williamson, we see three distinct attitudes regarding the coming of robots:
 - The idea that robots would create a new laboring underclass that might eventually revolt and threaten humanity's survival

 - The idea that robots could be a positive benefit to humanity by being relentlessly logical, programmable, and incorruptible

 - The idea that robots might indeed protect us from harm but, in so doing, might end up taking away many of our basic freedoms.

- It's difficult to think of many stories or movies about robots that don't traffic in one or more of these attitudes, and to a large extent, later stories and movies about computers or artificial intelligence would raise the same questions.
 - Both the 2004 television series *Battlestar Galactica* and Daniel Wilson's 2011 bestseller *Robopocalypse* revisit the first scenario of robots and computers taking over and trying to wipe out humanity.
 - The *Star Wars* movies, for the most part, portrayed the robots C-3PO and R2D2 as loyal, dedicated servants, more in line with Asimov's vision.
 - Williamson's more complex idea, that robots might become too overprotective, may be less common, although ironically, it shows up in some of Asimov's later stories, such as "The Evitable Conflict."
- A slightly different question is raised by such stories as Moore's "No Woman Born" or the movie *RoboCop*: If a robot is controlled by a single human brain or has human components, is it still a robot, a mechanically enhanced human, or something in between? This takes us back to our original question: Why are we so fascinated by the idea of artificial people?
 - The figure of the robot forces us to confront the fundamental question of what it means to be human, and as the sciences of artificial intelligence, medical technology, and communications continue to advance, it may well be a question that we will need to address in reality in the reasonably near future.
 - Whether or not we ever see the kind of mechanical humanoids of these stories, we are already facing artificial minds and smart machines that have begun to change the ways in which we live and interact with the world around us.

Readings

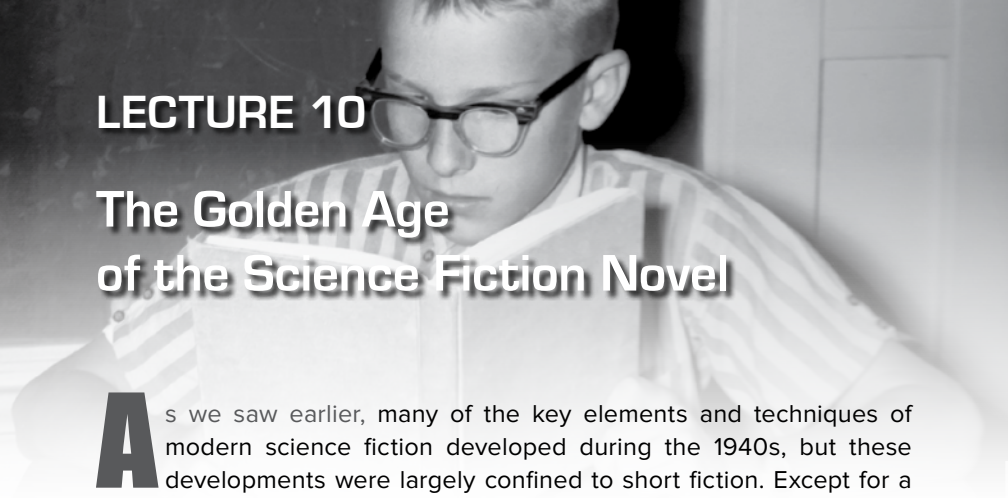
Asimov, *I, Robot*.

Čapek, *R.U.R. (Rossum's Universal Robots)*.

Questions

1 Humanoid robots have long served as a convenient image of a cheap, reliable labor force, especially for repetitive, menial, or dangerous tasks. At the same time, stories have proliferated about robots and machines revolting and declaring war on humanity. At a cultural level, does this anxiety over robots stem from a fear of technology or a fear of the consequences of exploiting an underclass?

2 Isaac Asimov's Three Laws of Robotics are: A robot may not injure a human being or, through inaction, allow a human being to come to harm; a robot must obey the orders given to it by human beings, except where such orders would conflict with the First Law; and a robot must protect its own existence as long as such protection does not conflict with the First or Second Law. These laws have been adapted by other writers and filmmakers for decades, but are they as linguistically and logically airtight as they appear? What are some of the possible ambiguities in these laws (some of which Asimov himself exploited in his stories)?



LECTURE 10

The Golden Age of the Science Fiction Novel

As we saw earlier, many of the key elements and techniques of modern science fiction developed during the 1940s, but these developments were largely confined to short fiction. Except for a few small presses, there was really no market among book publishers for a science fiction novel—an extended narrative conceived of as a whole rather than a way of stringing together related short stories. But in January 1950, *The New York Times* ran a feature on science fiction, saying that the field had graduated "from the pulp magazine era to its modern respectability of hard-cover books." In this lecture, we'll look at how that golden age began in 1950.

The Dawning of a New Age

- In the 1950s, some factors in the culture at large seemed to set the stage for taking science fiction more seriously. World War II had ended only a few years earlier in a way that seemed to many to come straight from a science fiction story—with a superweapon built on the principles of nuclear physics. By the end of January 1950, President Truman had ordered the development of a hydrogen bomb, and the arms race was on—to be followed closely by the space race, which would accelerate rapidly after the Soviet launch of Sputnik in 1957.

- The decade seemed to be a science fiction vision come true in other ways, as well, with the appearance of the first commercial business and scientific computer, UNIVAC; the launching of the first nuclear submarine; the identification of the structure of DNA; and the ability of unmanned spacecraft to show us the first images of Earth from space.

Each new development seemed like a realization of a science fiction dream—or nightmare.

- Science fiction writers responded to these developments with an outburst of creative energy that had not been seen in the field for at least a decade and never before at novel length. Major works appeared by Asimov, Poul Anderson, Hal Clement, James Blish, and others, as well as writers better known outside the science fiction field, such as Nevil Shute, Gore Vidal, Kobo Abe, and the astronomer Fred Hoyle.

The destruction brought about by the atomic bomb—and the knowledge that the Soviet Union had developed its own bomb—caused widespread fear of nuclear war in the 1950s.



Fahrenheit 451

- Ray Bradbury's *Fahrenheit 451* was a direct response to trends that Bradbury found worrisome in American society: the rise of television as a mass medium, the fears of censorship aroused by the House Un-American Activities Committee, the rise of Senator Joseph McCarthy, and internationally, the book burnings of the Nazis and the cultural purges staged by Joseph Stalin in the Soviet Union.

- *Fahrenheit 451* depicts a repressive future society in which books are prohibited, and "firemen," instead of putting out fires, are responsible for finding and burning caches of books. Montag, the protagonist, is a fireman who begins to question his occupation—and his society's values in general—when he meets a freethinking teenage girl named Clarisse and, later, witnesses an old woman immolate herself rather than stand by and watch her books be burned.

- Montag's boss, Beatty, was once a reader himself but explains to Montag that the rise of newer media, such as television, together with various past attempts to censor books for political or ideological reasons, led the government to decide that the potentially upsetting or contentious nature of books created a hazard to the goals of public happiness and conformity. Meanwhile, some sort of war apparently looms; bombers are regularly seen flying overhead, but no one seems to know or care much about the war.

- Montag, who has become fascinated with what might be contained in the books he burns, begins to amass a collection of his own. In a moment of poor judgment, he interrupts a gathering of his wife's friends and reads Matthew Arnold's powerful elegiac poem "Dover Beach" to the ladies, causing one of them to burst into tears.

- It isn't long before Montag gets another assignment and finds himself arriving at his own home—reported by his wife and her friends. In an act of open and violent rebellion, he incinerates Beatty and eventually makes his way to a rural community of exiles, who have made it their mission to memorize books in order to preserve them for a more

enlightened future. While Montag is with the exiles, one of the bombers destroys the city with a nuclear attack, possibly paving the way for rebuilding a more humane society.

- Because of its rather blunt and unmistakable message, *Fahrenheit 451* has become a popular classic. Some aspects of the book are rather dated, but others seem quite relevant today: the giant flat-screen televisions to which viewers seem addicted, the fads for dieting and sleeping pills, and the notion of ongoing wars that the public barely understands. When Montag flees after murdering Beatty, he becomes a television spectacle himself, with news helicopters offering visual images of his flight.

The Space Merchants

- Frederik Pohl and C. M. Kornbluth, authors of *The Space Merchants*, met as teenagers in New York, when both were members of the now-legendary Futurians fan group. One of the arguments made by the Futurians was that science fiction should more directly address political and economic issues, and this is clearly evident in *The Space Merchants*. It's set in a severely overpopulated, polluted, and resource-poor future ruled by megacorporations and advertising agencies.

- The narrator, Mitchell Courtenay, is a star copywriter for one of these agencies, Fowler Schocken Associates, and his latest assignment is to launch an ad campaign designed to attract emigrants to Venus by deluding them into believing that the planet will be some sort of frontier paradise. As portrayed in the novel, however, Venus is barely habitable, and any people who moved there would likely be miserable for generations.

- *The Space Merchants* may seem a surprisingly dark satire for what we often think of as the optimistic 1950s, but Pohl and Kornbluth were adept at using the techniques of science fiction to explore certain social trends that now seem well ahead of their time. The first sentence of the book sets the darkly humorous tone: "As I dressed that morning, I ran over in my mind the long list of statistics, evasions, and exaggerations that they would expect in my report."

- In the same chapter, Pohl and Kornbluth offer telling details about the world of the novel. We learn, for example, that fresh water has become a scarce commodity, a situation that some believe to be the work of "Consie saboteurs." Consies, it turns out, are conservationists, protesters concerned that the environment is rapidly being destroyed. References are made to the senators from DuPont Chemical or Nash-Kelvinator, "soot filters" that people must wear outdoors, and coffee and cigarettes to which addictive chemicals have been added.

- The plot of *The Space Merchants* is a bit silly in places, although it turns into an efficient enough thriller when Courtenay, on vacation in Antarctica, finds his identity wiped out in a series of deepening conspiracies and has to use his persuasive skills to work his way back to civilization—only by now, his awareness of the deep corruption of his society has altered his loyalties and sense of responsibility.

- The future depicted in *The Space Merchants* is very different from the one in Bradbury's *Fahrenheit 451*, of course, and with both novels, we're tempted to feel comfortable that we avoided such nightmares. But then, when we pause to think about corporate influence on government, the environmental hazards we face, and the capacity of the advertising industry to manipulate our behavior, we must wonder about those warnings we didn't entirely escape.

Childhood's End

- Arthur C. Clarke probably reached his greatest fame in the 1960s, when he collaborated with the director Stanley Kubrick on *2001: A Space Odyssey*. But some of the central ideas in *2001*—the notion that aliens may have intervened in human evolution or that humans might evolve into some transcendent form of life—were already apparent in *Childhood's End* (1953).

- In the late 20th century, the Cold War and the space race are as intense as in the 1950s, until enormous alien spaceships suddenly appear above the world's major cities. Surprisingly, the aliens, called the Overlords,

aren't ruthless invaders; rather, they see themselves as supervisors intervening to keep humanity from destroying itself, and their actual interventions are rather modest, such as ending bullfighting in Spain.

- Even though their supervision leads to an era of unprecedented peace and prosperity, the Overlords refuse to reveal themselves to humanity, promising to do so in 50 years, after humans are accustomed to their presence. Meanwhile, one earthman, named Jan Rodricks, manages to stow away aboard an Overlord supply ship so that he can get a glimpse of their home planet.

- The only problem with the decades of utopian existence on Earth is that some people come to feel that without challenges and conflicts, humanity's drive and creativity are withering. A kind of arts colony called New Athens is established, and not long after, the children in the colony begin to display psychic abilities. The Overlords then reveal their next surprise: Their real mission is to serve as a kind of universal cosmic consciousness called the Overmind and to nurture particular cultures—such as ours—to eventually join the Overmind.



- Ironically, the Overlords themselves, despite having reached a pinnacle of technological achievement, cannot take this last step; it's somehow reserved for chosen species with some sort of spiritual component, such as us. The children represent the next step in humanity's evolution, developing their mental powers to the point of altering reality and merging into a single consciousness. When Jan Rodricks returns from the planet of the Overlords, he witnesses the end of humanity and even the destruction of the Earth itself. In those final moments, he is the last human left alive.

- Clarke's novel is important in that it represents the uneasy tension between spiritual and material progress with which science fiction has often grappled. Clarke even suggests that material and scientific progress might eventually lead to a dead end, while the spiritual component offers us something transcendent.
 - » Yet Clarke himself was one of science fiction's great hard-science materialists, essentially rejecting the kind of mysticism that this novel implies; in effect, Clarke had written himself into a technological corner, with some sort of mystical transcendence as the only way out.

 - » For this reason, he took the unusual step of prefacing the novel with a disclaimer on the book's copyright page: "The opinions expressed in this book are not those of the author."

Readings

Bester, *The Stars My Destination*.

Clarke, *Childhood's End*.

Pohl and Kornbluth. *The Space Merchants*.

Wolfe, ed., *American Science Fiction*.

Questions

1 As mentioned in the lecture, changes in publishing, such as the rise of the paperback book, enabled more science fiction writers to turn to full-length novels, rather than magazine-length stories. What social, economic, cultural, and political shifts in the post–World War II era caused science fiction writers to turn increasingly to satirical and dystopian work, such as *Fahrenheit 451* or *The Space Merchants*, when that decade is otherwise often regarded as a high point of American optimism?

2 Ray Bradbury has argued that science fiction, partly by virtue of its very marginalization, was able to critique such politically charged movements as McCarthyism in a way that more realistic fiction steered away from. Can imaginative literature sometimes make more pointed political observations than other literature, especially in times of fear or intimidation?

LECTURE 11

From Mars to Arrakis: The Planet

Some critics have noted this distinction between fantasy and science fiction: Fantasy stories take place in a world, and science fiction stories take place on a planet. For example, Middle-earth in Tolkien's *The Lord of the Rings* is a fully realized world, with its own geography and various kinds of inhabitants, but we don't usually think of it as a planet because we can't look in the sky and imagine going there. In contrast, Ray Bradbury's *The Martian Chronicles* takes place on an actual planet that we can see in the night sky. In this lecture, we'll look at the differences between a world and a planet and see how planets are used in science fiction.

Worlds versus Planets

- If we acknowledge that fantasy stories take place in a world and science fiction stories on a planet, then we might say that a world is, in a sense, more of a moral space than a physical setting, and even when it makes some reference to an actual planet, we recognize fairly quickly that this is just a convenience for the fantasy writer.
 - When the Scottish writer David Lindsay published his classic philosophical fantasy *A Voyage to Arcturus* in 1920, he set it on an imaginary planet orbiting the star Arcturus, but the landscape of that planet was purely metaphorical, with no attention paid at all to what such an alien world might look like according to the astronomy of the day.

- The British writer C. S. Lewis said that Lindsay taught him what other planets were good for in fiction—namely, that they can be used as metaphorical settings to act out one's own ideas of morality. Lewis went on to write two novels, *Out of the Silent Planet* and *Perelandra*, that ostensibly take place on planets, but these planets are actually worlds, with spirits and magical events.

- In short, a world is a setting that exists because the story wants or needs it to exist, whether it's called a planet or not. At the opposite extreme are the hard science fiction writers—those who work out the geology, physical structure, atmosphere, gravity, and other details about their planet, whether it's real or imaginary. For these writers, there are basically only two kinds of planets available: real ones or imaginary ones that follow the rules of physics and astronomy.

The Martian Chronicles

- *The Martian Chronicles* is not a novel but a collection of linked stories that describes the exploration and colonization of Mars between 1999 and 2026. Paralleling the destruction of the native Martian population and the colonization of the planet detailed in these stories is the growing threat of worldwide nuclear war on Earth. In large measure, the book is a deliberate critique of American history and society.
 - For example, one story, "Way in the Middle of the Air," describes the outraged reaction of a bigoted store owner in a small Southern town when the entire black population of the town decides to move to Mars.

 - In another story, "The Off Season," an entrepreneur from New York opens Mars's first hotdog stand, planning to get rich off the new colonists—until he sees the Earth turn into an atomic fireball in the night sky and realizes that there won't be any colonists.

- The issues central to these stories—race relations, fear of nuclear war, and political oppression—were very much on people's minds in the post–World War II era when these stories were written. In a way, it seems that Bradbury saw science fiction less as a telescope for peering into the far future and more as a microscope for examining contemporary society.

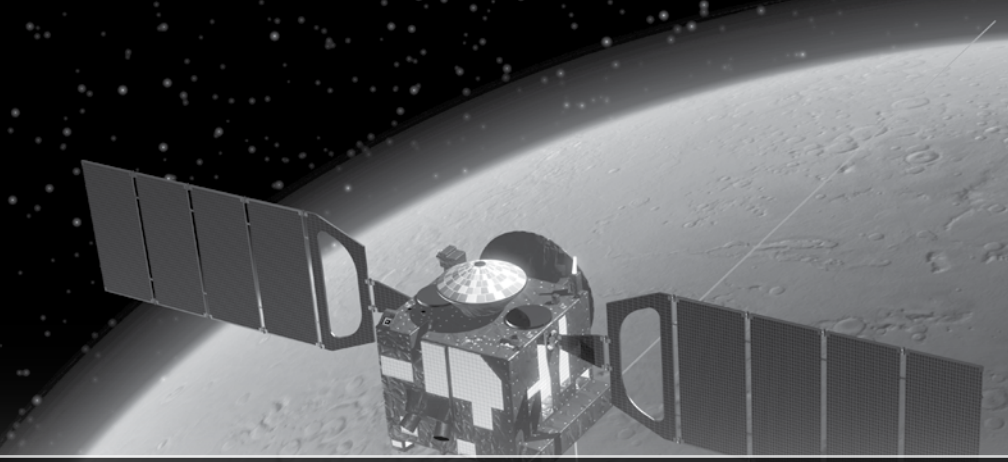
- For his purposes, Bradbury wanted a planet that could credibly be seen as a future frontier. A number of stories in the book reflect the argument—put forward by Frederick Jackson Turner—that the Western frontier provided opportunities for new beginnings, democratization, and the casting off of old prejudices and constraints. Later historians have questioned the details of Turner's thesis about the presence of a frontier to explain the development of American democracy and society, but the idea caught on with the popular imagination.

- Eventually, Bradbury's settlers begin to find themselves transformed by the new landscape, to think of themselves as Martians rather than emigrants, just as the early colonists eventually began to think of themselves as Americans rather than English settlers.
 - At the end of the last story in the book, "The Million Year Picnic," a father promises his children that he will take them to see "real Martians," even though by now, the native Martian population has been wiped out by disease and conquest. What he shows them is their own reflections in one of the ancient Martian canals.

 - As this story suggests, Bradbury was also acutely aware of the negative consequences of the frontier mentality.

Red Mars, Green Mars, Blue Mars

- Probably the most extensive epic of Mars colonization to date is Kim Stanley Robinson's trilogy (1993–1996) consisting of the novels *Red Mars*, *Green Mars*, and *Blue Mars.* Robinson set out to describe the colonization of Mars by making use of the most accurate scientific data available to him in the 1990s.



In the 1870s, markings that resembled channels observed on Mars were thought to be the work of intelligent beings, giving rise to the myth of an ancient civilization on Mars.

- Robinson gave serious thought to the realistic problems of establishing a colony on Mars and, eventually, "terraforming" the planet—basically changing it to become more earthlike and amenable to life. But at the same time, like Bradbury, he made it clear that he also viewed Mars as a new frontier.

- In Robinson's work, the first man to set foot on Mars is John Boone—a name that inevitably suggests Daniel Boone. The first 100 Martian colonists arrive in 2026; eventually, they establish a viable colony and even attempt an abortive revolution to declare independence from Earth. By the time of the second volume, *Green Mars*, the problem is no longer establishing viable colonies but uniting them into a workable central government.

- As in *The Martian Chronicles*, Earth itself faces serious problems: Transnational corporations have grown more powerful than governments, and scarce resources and increasing population have resulted in international tensions and conflicts that, by the end of *Red Mars*, lead to a world war.

- Meanwhile, Mars is being transformed through advanced technologies, such as the "Russell cocktail," a mix of greenhouse gases developed to aid terraforming by trapping heat near the surface. By the end of *Green Mars*, another war of independence from Earth is more successful, partly because Earth itself has been devastated by a massive ecological catastrophe involving the rise in ocean levels.

- The final novel in the trilogy, *Blue Mars*, takes place on a Mars almost completely transformed, with surface water beginning to form rivers, lakes, and seas. By now, we're well into the second century of colonization, when Mars has elected its first president and begun to establish colonies throughout the solar system. Although the ethics of terraforming is a continual topic for debate among the characters, Robinson presents it as something almost inevitable given the population pressures of Earth and Mars.

The Planet Arrakis

- Perhaps the most famous imaginary planet in science fiction literature is the desert planet Arrakis, sometimes known as Dune, in Frank Herbert's wildly successful novel of that title. Herbert imagined Dune as a planet orbiting the star Canopus.

- Dune is home to a settlement of humans called the Fremen, but the most spectacular features of its ecology are the giant burrowing "sandworms" that grow to more than 1,000 feet long. The planet is the only known source in the universe for a drug called spice, or melange, which can extend lifespan; enhance energy; and in some people, even produce psychic powers. Without it, interstellar travel would not be possible and humans would die at an earlier age.

- It's not surprising that something as valuable as melange should set off enough plots, rivalries, and battles to fill some 17 novels so far. But the greater achievement in the series is Herbert's ability to create a planet that practically functions as a character.

- Set more than 200 centuries in the future, when thousands of planets have been colonized, *Dune* is basically the story of Paul Atreides, whose family is granted control over Dune by the galactic emperor. This turns out to be something of a trap, because the emperor has allied himself with the rival Harkonnens, who can wage a war against the Atreides clan that the emperor himself would dare not risk.

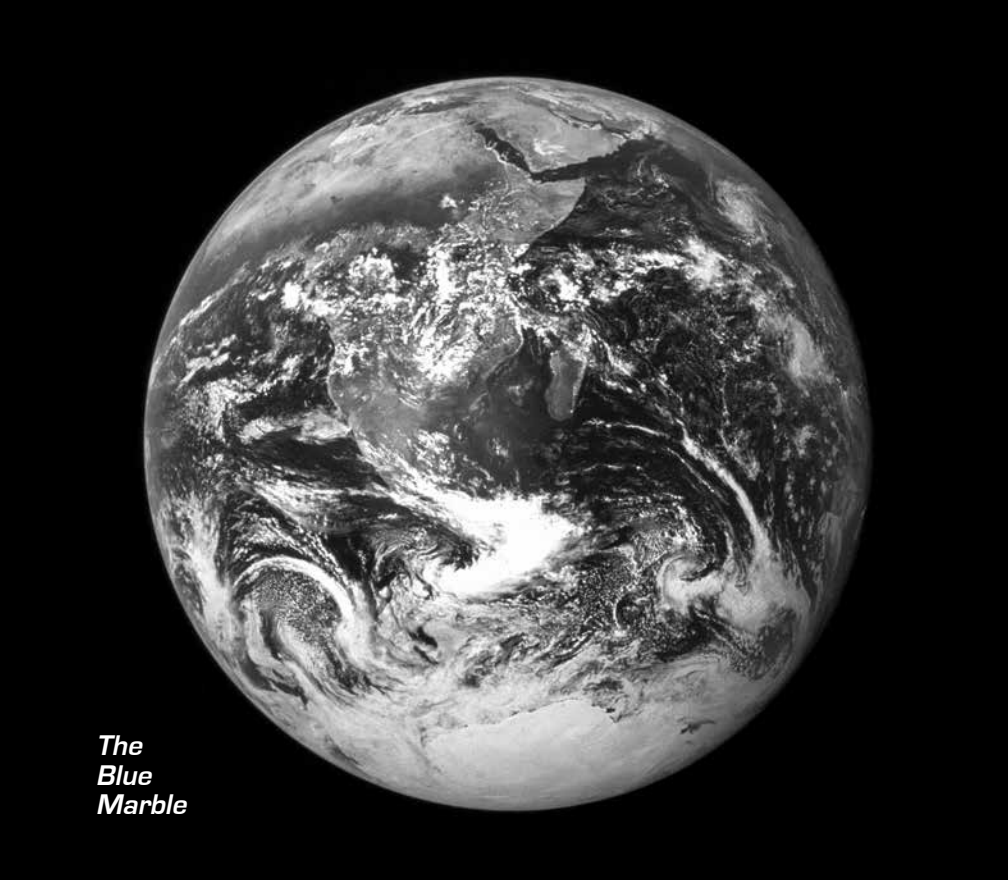
- Paul, however, is more than he seems. He might be the long-awaited messiah of a secret society or of the Fremen. When his family is attacked and Paul and his mother flee into the desert to join the Fremen, his path toward developing godlike powers becomes increasingly apparent.

- Herbert made an unusual choice in designing his future galactic empire: All computers have been banned centuries earlier as blasphemous; thus, humans have computer-like skills of their own. We encounter, for example, human computers called mentats. This lends the series of novels a mystical, quasi-religious tone that is no doubt part of its lasting appeal.

- Herbert is careful, however, to keep the planet Arrakis from turning into an allegorical fantasy world; his characters must play by the ecological ground rules he has established. For example, the production of melange depends on a delicate ecological balance, which is endangered by efforts to terraform Arrakis. A "planetologist" in *Dune* reminds the Fremen that an ecosystem is, in fact, a system "that can be destroyed by a misstep in just one niche."

Planets as Systems

- This characterization of the planet as a system is exactly why science fiction planets are different from fantasy worlds. Whether an imaginary extrasolar planet or some version of a real planet, the planet in science fiction is part of a system—a system that can be disrupted by a simple failure to foresee consequences.



The Blue Marble

- In 1972, the Apollo 17 astronauts sent back to Earth what is probably the most famous photograph to have emerged from the spaceflight program: *The Blue Marble*. Until we began seeing such images from space, the Earth was the world—in the sense we've been using the term to describe the moral spaces of imaginary or fantasy worlds. It was everything we could see around us and everything anyone had ever seen. But from the vantage point of outer space, it wasn't just what we could see around us; it became a planet, floating in darkness.

- Some psychologists later came to term this shift in perspective the *overview effect*, a recognition that this fragile marble represented everything humans had ever accomplished. And with that came the realization, in the words of Herbert's planetologist, that it was also a system that could be damaged or destroyed.

Readings

Bradbury, *The Martian Chronicles*.

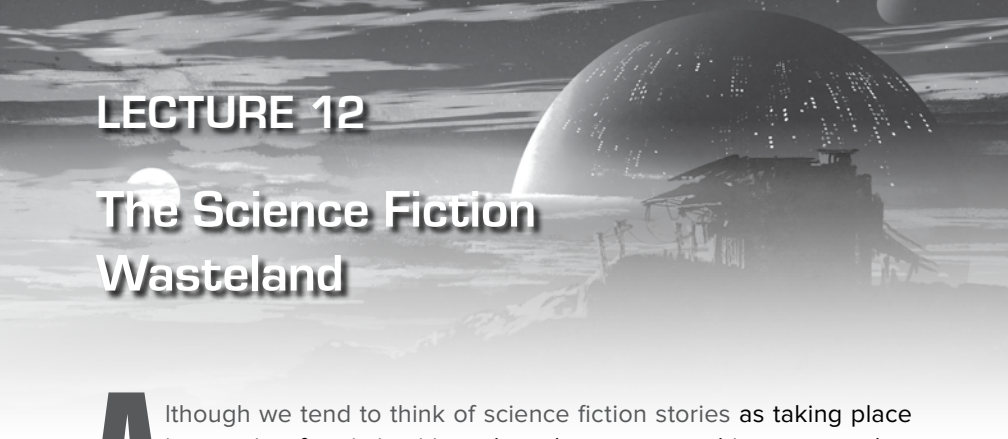
Herbert, *Dune*.

Robinson, *Red Mars*.

Questions

1 The critic John Clute has suggested that a major shift occurred with the rise of scientific research in the 18th century and that part of this shift was the growing realization that we live on a planet rather than in a world. What is the philosophical difference between "planet" and "world" in terms of how we situate ourselves in the universe?

2 Frank Herbert's novel *Dune* depicts a desert world with a carefully balanced ecology in which water is a scarce resource. From the point of view of thought experiments regarding ecology and environmental science, what are the relative advantages of such an imaginary planet over actual planets, such as the Mars depicted in Kim Stanley Robinson's *Red Mars* trilogy?



LECTURE 12

The Science Fiction Wasteland

Although we tend to think of science fiction stories as taking place in amazing futuristic cities, aboard great spaceships, or on other planets, we should remember that since the very beginning of the genre, there has also been a darker, bleaker kind of setting: landscapes devastated by war, natural disaster, or environmental collapse or left to become ruins after nearly all humans have died. Such settings have appeared consistently in science fiction since its beginnings and have become almost as common in horror and fantasy fiction. These environments serve to remind us of the fragility of life and civilization and of how simply and suddenly they may come to an end.

The Wasteland as Frontier

- The British science fiction writer J. G. Ballard once wrote,

> The catastrophe story ... represents a constructive and positive act by the imagination rather than a negative one, an attempt to confront the terrifying void of a patently meaningless universe by challenging it at its own game.

In George R. Stewart's 1949 novel *Earth Abides*, the protagonist, who has survived a plague that wiped out nearly all of humanity, comments,

> Now we have finished with the past ... This is the Moment Zero, and we stand between two eras. Now the new life begins. Now we commence the Year One.

- In other words, many of the wastelands of science fiction can become frontiers just as new planets can be—a way to wipe the slate clean and start over, an arena for the kind of heroic action we used to admire in westerns but that is increasingly unavailable to us in our civilized, urban environments.

- In the words of the philosopher of religion Mircea Eliade, these stories may stem from a suspicion or fear that "life cannot be *repaired*, it can only be *re-created* by a return to sources." But whether or not civilization will be able to rebuild or the human race will be able to survive at all remain open questions in many science fiction novels.

The Scarlet Plague

- Jack London is, of course, best known for his tales of wilderness survival, such as *The Call of the Wild* or *White Fang*. But in 1912, he published a science fiction novella called *The Scarlet Plague* that went a long way toward establishing a template—almost a narrative formula—for many later apocalyptic novels.

Science fiction is neither the first nor the only form of storytelling to set stories in blasted landscapes; the theme also appears in ancient myths, suggesting that catastrophes may represent the opportunity for renewal.



- In London's story, a strange plague arrives in San Francisco in the year 2013, killing almost all who encounter it. In the wake of the plague, civilization rapidly breaks down. One survivor is a professor of literature named James Smith, who is telling the story 60 years later to a group of youngsters. Now an old man, Smith estimates the population of the world in 2073 as less than 400, and he despairs that despite his best efforts at education, the generations that followed him have lost all but the most basic skills of reading and math.

- Most of the novel recounts Smith's adventures during those 60 years, with his own fragile community coming together and being challenged by a brutal tribal leader. In the end, Smith suspects that civilization will slowly rebuild but that with that rebuilding will come the repetition of the cycles of violence that characterized all prior human history.

- In *The Scarlet Plague*, we can already see the outline of the narrative structure that will reappear in many apocalyptic stories:
 - The first portents of the catastrophe arrive, or the protagonist gradually becomes aware of the extent of it.
 - The protagonist undertakes a journey through the wasteland left behind by the disaster, perhaps finding a few other survivors.
 - The few survivors and, perhaps, their first children establish a kind of stable community.
 - The community is threatened by the reemergence of the wilderness and the problems of establishing a stable home.
 - An antagonist or warlord emerges who challenges the community, leading to a contest over which values will prevail in the new society.

Destruction by Disease

- One of the finest novels to follow London's pattern was George R. Stewart's *Earth Abides* (1949). The novel begins with Isherwood Williams (Ish), a graduate student in ecology, slowly recovering from a snakebite in his remote cabin. As he makes his way back to civilization, he finds abandoned shops, gas stations, and villages; eventually, he comes across a newspaper describing the rapid spread of a new, mostly fatal pandemic.

- Ish travels across the country and, ultimately, meets another survivor, Emma; the two start a family. Gradually, as the surviving mechanisms of civilization fail—plumbing, electricity, gas—Ish tries to teach the younger generation how to preserve these amenities but with little success, and nature reasserts itself in the form of plagues of ants, rats, and even mountain lions.

- Decades later, the community is a success, but the younger generations are reverting to superstition. Ish's hammer, which he has had with him since the beginning, becomes not a symbol of rebuilding but a kind of magical totem that the children are afraid even to touch.

- The antagonist shows up in the form of Charlie, a survivor and likely former criminal from Los Angeles, who challenges Ish's authority and brings into the community venereal diseases and typhoid fever. The latter kills Ish's son Joey, the only one of the younger generation who had learned to read.

- At the close of the book, Ish realizes that his efforts to preserve much of the old civilization have failed. In the end, he thinks of the line from Ecclesiastes that gives the novel its title: "Men come and go, but earth abides."

Destruction by War

- As one scholar noted, before World War I, diseases and natural cataclysms were the source of most apocalyptic fiction, whereas after the war, the majority of such fictions resulted from human action—wars, science gone awry, and so on. World War II upped the ante even further, giving us a series of weapons that could destroy civilization far more efficiently than anything the world had ever seen.

- One novel that deals with the wastelands left by war is Walter M. Miller, Jr.'s *A Canticle for Leibowitz*. The book concerns a monastery in Utah that tries to preserve valuable documents from our own age after a nuclear war has returned the world to a medieval level of technology.

- The book consists of three long sections, each set about 600 years after the previous one. The action in the first section occurs about 600 years after a worldwide nuclear holocaust has reduced society to barbarism and made it actively hostile to any form of learning.
 - As in our own Middle Ages, the role of the Catholic Church's monastic tradition includes preserving and interpreting ancient texts. Among the key texts here is a series of documents belonging to Isaac Leibowitz. He was a Jewish scientist who later converted to Catholicism, was martyred for his attempts to preserve scientific knowledge, and became the founder of a monastic order. The documents, however, include such things as shopping lists and circuit diagrams that the monks can make little sense of; nonetheless, they eventually result in Leibowitz's canonization.

 - This first part of the novel, titled "Fiat Homo" ("Let there be man"), is essentially Miller's version of the wasteland motif we've seen earlier, with civilization showing little signs of recovery.

 - The second section, "Fiat Lux" ("Let there be light"), jumps forward to the 32nd century. By the end of this section, a kind of scientific awakening seems to be at hand.

» The final section takes us to the 38th century, which is more scientifically advanced than our own present. But the major rival powers of the world, the Atlantic Confederacy and the Asian Coalition, are on the verge of nuclear war. Ultimately, Leibowitz's documents are sent for preservation to a colony in space, while the abbey where they had been kept is annihilated.

Destruction by Nature

- In addition to plagues and nuclear wars, another path to apocalyptic wastelands has been some great natural disaster, such as a comet striking the Earth or the melting of the polar ice caps. In Cormac McCarthy's brilliant but bleak novel *The Road* (2006), the source of the catastrophe is never made clear.
 » Indeed, McCarthy seems uninterested in providing an explanation. All we're told is this: "The clocks stopped at 1:17. A long shear of light and then a series of low concussions." It could as easily be a nuclear war as an asteroid strike.

In stories of the Earth as a wasteland, the question of whether or not civilization will be able to rebuild or the human race will be able to survive often remain open.



- McCarthy's apocalypse is filled with horror-story imagery, but at the same time, it's almost abstract, and his plot is barely existent. A father and son make their way through a nightmare landscape after the mother has committed suicide, hoping to reach a warmer climate before winter arrives. This may be one reason that some critics from outside the science fiction community saw the novel as an allegory or a metaphorical vision of the brutality of the universe. For us, the novel represents the wasteland theme in its purest form.

- In Neal Stephenson's 2015 epic *Seveneves*, a natural disaster again threatens all life on Earth. Some unknown force, possibly a black hole, shatters the Moon into fragments; scientists realize that over time, a massive rain of these fragments will render Earth uninhabitable for thousands of years. With only a couple of years to prepare, world governments launch hundreds of small habitats, called arklets, offering a chance for thousands to survive.
 - As in the five-part structure mentioned earlier, an antagonist to the lead scientist eventually arises to challenge her authority, splitting the community into opposing camps and resulting in struggles that reduce the tiny population further. Through a series of additional disasters and crises, the entire human race is reduced to fewer than a dozen survivors, including the seven Eves of the title—seven women, each of whom gives birth to a new strain of humanity.

 - Although the hostile environment of space is itself a kind of wasteland, the more traditional wasteland journey doesn't show up until the final third of this long novel. The descendants of those survivors, 5,000 years later, return to explore the surface of the Earth, which is all but unrecognizable.

 - In *Seveneves*, Stephenson joins the grand tradition of wasteland tales, nearly all of which, in the end, ask the question: How far to the brink can humanity be pushed and still hope to recover in some way? In just about all the stories we've seen, the civilization we know is destroyed, but that's not necessarily true of humanity

itself. Instead, the authors seem to want to locate the core values of human life by stripping away all the excesses—or, as J. G. Ballard put it, to "remake zero by provoking it in every conceivable way."

Readings

London, *The Scarlet Plague and Other Stories*.

McCarthy, *The Road*.

Miller, *A Canticle for Leibowitz*.

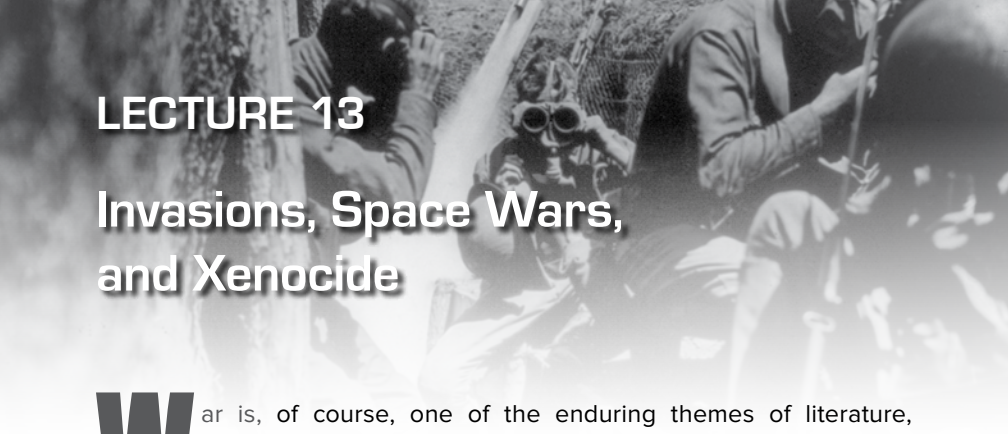
Stephenson, *Seveneves*.

Stewart, *Earth Abides*.

Questions

1 Stories set in wastelands or ruined cities have long been popular, whether the source of the catastrophe lies in science fictional speculation, such as nuclear war or environmental collapse, or in supernatural occurrences, such as zombie uprisings or even end-times revelations. What are the sources of this appeal, and are science fiction apocalypses significantly different from supernatural apocalypses in terms of narrative?

2 Some apocalyptic narratives, including *A Canticle for Leibowitz*, reflect the idea of earlier historical theorists, such as Oswald Spengler, that history may be interpreted as cyclical, with periods of decline and catastrophe followed by rebuilding, then further catastrophe. Although this is highly questionable as serious historical theory, what opportunities does it provide the science fiction novelist?



LECTURE 13

Invasions, Space Wars, and Xenocide

War is, of course, one of the enduring themes of literature, from the *Iliad* through Shakespeare and Tolstoy, right up to 20th-century novels by Norman Mailer, Joseph Heller, and Tim O'Brien. It's not surprising, then, that war is a significant theme in science fiction. Like traditional war stories, those in science fiction may try to convey the brutality of battle, celebrate heroism, point out the absurdities of war, or even critique wartime policies and strategies. Science fiction war stories also often center on fear, technology, or fear *of* technology. In this lecture, we'll focus not only on how science fiction has portrayed warfare but also on how it has responded to actual historical wars.

The Franco-German War

- The Franco-German War of 1870–1871 helped create the popular subgenre of military science fiction known as the *invasion story*. This war led to the unification of Germany under Bismarck and the establishment of the French Third Republic, which remained France's government until 1940.

- The war's importance to science fiction came about when a lieutenant colonel in the British army, George Tomkyns Chesney, alarmed at the swiftness and efficiency of the German army in defeating France, started worrying about a possible invasion of England. In 1871, he published a long story called "The Battle of Dorking," in which he described the invasion and conquest of England by German forces.

- The narrator of the story is a veteran recounting the events to his grandchildren long after the British Empire has been dismantled and England has become an overtaxed and oppressive dystopia. Much of the story deals with England's bumbling efforts to mount a defense using unprepared volunteers, leading to the humiliating battle of the title.

- The immediate impact of the story was probably the closest thing to a media firestorm that 19th-century communications could manage. Articles indignantly contested Chesney's assumptions or picked apart his critique of military preparedness, while others viewed the story as almost literally a call to arms.

- The invasion tale took off like wildfire, not only in England but also in France, Germany, and the United States. Some estimates count the number of novels and stories on this theme between 1870 and 1914 at more than 400. Many rehashed Chesney's original scenario in different locations; others focused on different enemies, such as China. Two of the most successful authors in this genre were George Griffith and William Le Queux.
 - The prolific Le Queux published some 150 novels during his lifetime, but his first important contribution to invasion literature was *The Great War in England in 1897* (1894). Later, his *The Invasion of 1910* was credited with stirring up anti-German emotions in the years leading up to World War I.

 - George Griffith's most successful invasion novel was also his first, *The Angel of the Revolution*, published in 1893 as a direct response to the invasion tale craze. Here, the invaders are a kind of anarchist-socialist revolutionary group calling itself the Brotherhood of Freedom, who develop such superior air power that they virtually conquer the world.

World War I

- World War I essentially brought an end to the invasion trend, but not before the most important science fiction writer of the day, H. G. Wells, took the theme to a whole new level. Wells wrote his share of future war stories, including *The War in the Air* and *The World Set Free*, but before either of these, he had published *The War of the Worlds*, in which the invading force is not Germany or China but an advanced and decadent society on Mars.

- Sometime after an astronomer notes strange explosions on Mars, an apparent meteor lands near the narrator's home in Surrey, but it turns out to be a cylinder containing hideous, octopus-like Martians. A small group hoping to communicate with the aliens is incinerated by a heat ray; soon, Martian war machines are easily defeating the military, using death rays and poison gas. The narrator encounters various characters who represent different responses to the crisis, but no one seems to have a workable plan of resistance, and eventually, the war is lost.

In a sense, World War I was the first science fiction war, taking advantage of tanks, submarines, aircraft, and other technologies that had earlier been described in science fiction stories.



- Many people who have only seen the movie versions of *The War of the Worlds* might assume that the tale is basically over at this point, but in fact, there is an entire second section to the novel, titled "The Earth under the Martians." In this section, rather than warning about preparedness for war, Wells explores genuinely science fictional ideas about the possible future evolution of humanity and the effects of destructive colonialist policies.

Genocidal Wars

- The anticolonialist viewpoint of Wells's novel was overturned by Garrett P. Serviss, who responded to it with *Edison's Conquest of Mars*. In this book, the American inventor Thomas Edison, worried about another Martian invasion, finds a way to annihilate Martian civilization. Although *Edison's Conquest* is a fairly silly novel, it helped introduce a recurrent, disturbing theme in science fiction treatments of war: the notion that wars with alien species would become genocidal.

- The "us-or-them," "annihilate-or-be-annihilated" stance is characterized by novels in which the human race is itself destroyed by aliens, as in Thomas M. Disch's *The Genocides* (1965). In Robert A. Heinlein's famous *Starship Troopers* (1959), the enemies are hideous spider-like monsters informally called Bugs, and in Orson Scott Card's *Ender's Game*, they're called Buggers. Both of these descriptions make it easier for the reader to think in terms of extermination, even though these are actually advanced technological civilizations.

- In a few novels, the morality of genocide is brought into question even in the context of a war for survival. *Ender's Game* concerns a brilliant boy named Ender Wiggins, who is recruited for training in the conduct of high-tech warfare. Ender succeeds admirably in a set of increasingly challenging training exercises, culminating in one in which his mission destroys the home planet of the Bugs. But afterwards, he learns that he has been duped by his instructors; in fact, the final "exercise" was a real battle—making him essentially responsible for the genocide of an entire civilization.



Orson Scott Card, author of *Ender's Game*, coined the term *xenocidal* to describe the annihilation of alien species.

- Two other novels also treat the moral conundrum of genocide in a complex way. Greg Bear's *The Forge of God* (1987) features the destruction of Earth by a hostile alien race known only as the Killers, but a more benevolent group of aliens manages to rescue a few humans and give them a home on a terraformed Mars. The novel's sequel, *Anvil of Stars*, depicts a mission to find and destroy the home planet of the Killers. But the Killers turn out to be far more complicated and their universe far stranger and more alien than the humans suspect.

Starship Troopers and *The Forever War*

- The future society of Robert A. Heinlein's *Starship Troopers* seems to be a stable, almost utopian state in which racial and gender discrimination no longer exist; we learn this fairly late in the book, when we realize that the protagonist, Johnny Rico, is a non-white Filipino.
 - But it's also a society in which voting rights are restricted to those who have spent time in government service and in which flogging and even executions are standard techniques for maintaining discipline. War, Johnny learns in officer training school, is simply "controlled violence to enforce orders."

 - Duty, responsibility, and self-reliance are the chief virtues that Johnny learns during his career in the Mobile Infantry. Although there are a few well-realized tactical battle scenes, the novel centrally concerns Johnny's training, his decision to make the military his career, and Heinlein's ideas about how a society should be organized.

- With many readers viewing *Starship Troopers* as glorifying war, endorsing a near-fascist state, or providing a platform for one-sided social criticism, the novel became one of the most controversial works in modern science fiction and generated a number of fictional responses. But almost certainly the most important novel to follow in its wake, Joe Haldeman's *The Forever War*, was not written as a rebuttal to *Starship Troopers*, though it may read that way today.
 - Haldeman was a lifelong science fiction fan who was drafted and served as a combat engineer in Vietnam. His second novel, *The Forever War*, combined his firsthand combat experience with the science fiction imagery he knew so well.

 - The name of Haldeman's protagonist, William Mandella, hints at the book's autobiographical content. Haldeman's middle name is William, and Mandella is almost an anagram of Haldeman. His fellow soldier and eventual wife, Marygay Potter, is almost exactly the name of Haldeman's wife, Gay, and an important subplot of the novel is the love story between the two characters.

» Another subplot involves the alienation and disorientation that soldiers experience when returning home from a tour of duty—an experience that was particularly acute for Vietnam veterans. Haldeman dramatically magnifies this using the science fiction device of relativistic time dilation—the difference between the way time passes for the soldiers traveling at faster-than-light speeds through the "collapsars" that transport them instantly across the galaxy and the comparatively much more rapid passage of time on Earth.

» As a result, centuries may pass before Mandella gets back from each mission, and the entire novel takes him from the year 1997 to the year 3143, although he ages only a few years. At one point, he returns to find that homosexuality has become the norm as a way of limiting population growth; at another, clones have come to dominate society; and so forth. There is, in a very literal sense, no place for him or Marygay in the world of 3143.

» Haldeman uses many devices of science fiction in this future war story, but he also highlights the kinds of daily frustrations and military absurdities that all soldiers face—what Mandella calls "typical Army half-logic." Indeed, the cause of the war itself is pretty thin on logic: Some colonization space ships have been mysteriously lost, and one is reported to have been attacked by an alien vessel. But what the enemy Taurans really want, if anything, remains a mystery.

» Mandella eventually becomes one of the senior veterans of the war, and then, rather suddenly, returning to the staging area known as Stargate, he learns that the war has been over for 221 years (the effects of time dilation again). He manages to reunite with Marygay, and they settle on a peaceful, earthlike planet that has been set aside as a kind of refuge for heterosexuals.

» *The Forever War* is in no sense a political tract in the manner of *Starship Troopers*, nor is it a cautionary tale about military preparedness. Although its overall theme involves the absurdity, miscommunications, distorted logic, and sometimes purely economic motives that lie behind many wars, it is also among the most haunting and contemplative treatments of actual combat in science fiction.

Readings

Clarke, *Voices Prophesying War*.

Franklin, *War Stars*.

Haldeman, *The Forever War.*

Heinlein, *Starship Troopers*.

Wells, *The War of the Worlds.*

Questions

1 The popular imaginary war narratives in British and European literature in the late 19th and early 20th centuries, from "The Battle of Dorking" to *The War of the Worlds*, largely focused on fears of the homeland being invaded, while later-20th-century American works, such as *Ender's Game* or *The Forever War*, focus on travel into outer space to meet a largely mysterious enemy. What are the social, economic, and historical forces that account for this contrast?

2 In what ways does the disorientation and alienation felt by the returning veterans in Haldeman's *The Forever War* echo the actual disorientation felt by Vietnam veterans, such as Haldeman himself, and what if any other parallels are there between this imaginary and this historical war?

LECTURE 14

Religion in Science Fiction

It often seems that there is an uneasy relationship between science fiction and religious thought. Some authors, for example, start with familiar religious stories and ironically turn their meaning into outcomes of science fiction scenarios. In other examples, the irony is reversed: Stories using science fiction scenarios seem to validate religious belief, usually inadvertently. Beyond these basic gimmicks, a good many science fiction writers have seriously attempted to examine the nature of religious faith, usually in one of two ways: by confronting existing religions with moral conundrums that test the beliefs of individuals or by inventing their own religions and examining their possible purposes and functions.

A Case of Conscience

- James Blish's 1958 novel *A Case of Conscience* is an unusually complex and thoughtful book, with a good deal of philosophical dialogue. Its central character is a Peruvian Jesuit priest, Father Ramon Ruiz-Sanchez, who is one of four commissioners sent to the planet Lithia, some 50 light-years away. His mission is to determine whether or not Lithia would be appropriate as a port of call for the expanding human civilization and whether contact or trade would be safe for both humans and the native Lithians, who are basically 12-foot-tall intelligent lizards.

- At first, Lithian society seems rather dull, with no crime, newspapers, arts, political parties, and so on; in fact, it is a kind of utopia based on pure logic. "There are no criminals, no deviates, no aberrations of any kind," yet the Lithians remain individuals, always choosing to do the ethical thing without external constraints. Later, Ruiz-Sanchez says they

are “the most perfect example of how human beings ought to behave that we’re ever likely to find,” yet they have no gods, myths, legends, or belief in the supernatural.

- For Ruiz-Sanchez, this society based on pure logic is a problem. While the other commissioners make their recommendations based on such practical considerations as the planet’s reserves of lithium, which can be used in making nuclear weapons, Ruiz-Sanchez argues that Lithia should be placed off limits and quarantined for good.

- Ruiz-Sanchez has two main arguments for this recommendation. First, the Lithian life cycle seems to validate evolution, challenging the Church’s belief in creationism. Second, the priest believes that the whole of Lithian society is a construct put in place by Satan to tempt believers away from Church teachings.
 - » After all, if a stable, equitable, crime-free society can be developed through the simple exercise of logic, without the external constraints imposed by God or Church authority, then who needs religion at all?

 - » Ironically, in putting this idea forward, Ruiz-Sanchez himself is violating Church doctrine. His notion that Satan might have the power to create all of Lithia is a version of the Manichaean heresy, which says that only God has the power of creation. Later in the book, Ruiz-Sanchez visits the pope, who suggests that all Satan really created was an illusion; Ruiz-Sanchez ends up being excommunicated.

- The first part of *A Case of Conscience* ends when the commissioners return to Earth, and Ruiz-Sanchez is given a gift by his Lithian friend Chtexa—a jar containing an egg that is Chtexa’s son, who will be born on Earth. This sets up the second part of the novel, in which Lithia’s fate is debated back on Earth. At this point, the novel becomes more satirical in tone.

- The egg hatches, and the young Lithian, Egtverchi, grows up, gains citizenship, and becomes a popular society figure. Because of his unique take on human affairs, he becomes a media personality, with “a lunatic following.” Eventually, Egtverchi stirs up a major riot that threatens the society on Earth.

- Back on Lithia, one of Ruiz-Sanchez's original colleagues—the one who wanted to mine Lithia for weapons materials—has set in motion a campaign of deforestation, even cutting down the giant Message Tree that enables the Lithians to communicate worldwide. Probably through this character's machinations, the planet of Lithia ultimately blows up.

- Ruiz-Sanchez suspects that the representative from Lithia had some sort of demonic influence on Earth. At the same time, it seems that the earthmen have had a genuinely apocalyptic influence on Lithia, destroying a society far more stable than their own. Ruiz-Sanchez's fear that contact between Lithia and Earth would be catastrophic is realized, although it is far from clear that religion itself played any sort of causative role in the catastrophe.

The Sparrow

- Mary Doria Russell's 1996 novel *The Sparrow* also features a Jesuit priest, Father Emilio Sandoz. In this book, Jesuits are again involved in first contact with the inhabitants of another planet, but in some ways, this work is more tough-minded than Blish's in questioning the nature and value of religious faith. Unlike Blish's rather intolerant priest, Russell's Sandoz is deeply conflicted over his own tendencies toward agnosticism; as he himself says, he can make all the arguments, but he can't really feel God.

In science fiction that features religious characters, particularly Christian or Catholic characters, they often seem to be Jesuits; one reason for this is that the Jesuit order has a long history of interest in science and exploration.





The Arceibo Observatory, the world's largest and most sensitive radiotelescope, plays a role in Mary Doria Russell's *The Sparrow*, picking up signals from Alpha Centauri.

- *The Sparrow* is told in two timelines. In one, the giant radio telescope in Arecibo picks up signals from the region of Alpha Centauri in the form of beautiful musical compositions. This leads to a secret Jesuit space expedition to find the source of the signals, which turn out to come from a planet called Rakhat. Father Sandoz goes along as the mission's linguist. The second timeline is set 40 years later, when Father Sandoz is the mission's only survivor and is the subject of an inquest by the Jesuits to find out what really happened on Rakhat.

- In the course of the book, we learn some rather shocking clues about what took place on Rakhat but not why. For example, the mission that rescued Sandoz found him, his hands horribly mutilated, apparently working as a prostitute; his first act upon being discovered was to murder a young girl who was obviously devoted to him. The reasons behind this are what so severely tested Sandoz's faith during his years on Rakhat.

- When they initially arrived on Rakhat, the Jesuits had befriended a simple gatherer society of vegetarians, the Runa. But these simple people could not have made and broadcast the music picked up back on Earth. That, it turns out, comes from a more developed urban society called the Jana'ata, who prey on the Runa. Ultimately, when Sandoz himself is kept as a Jana'ata sex toy and raped repeatedly, he learns that his captor is one of the composers of the music and that the songs are celebrations of rape and sexual abuse.

Invented Religions in Science Fiction

- One of the most famous invented religions in science fiction is the Church of All Worlds, founded by the title character in Robert A. Heinlein's 1961 novel *Stranger in a Strange Land*. Heinlein himself described this book as a "philosophical fantasy" rather than science fiction.
 - The book concerns Valentine Michael Smith, the sole survivor of the first expedition to Mars, who is raised by Martians and is taken to Earth when the second expedition arrives 25 years later. Smith brings with him ideas from ancient Martian civilization when he becomes an influential figure back on Earth.

 - As the sole heir of the original crew, Smith is not only very wealthy but, according to legal precedent, the sole owner of Mars. With the aid of a popular writer named Jubal Harshaw, he becomes a worldwide media celebrity and uses his position to eventually found what he calls the Church of All Worlds.

 - But another religion has already gained considerable influence on Earth, the Church of the New Revelation, called Fosterites after its founder. The Fosterites are a frankly hedonistic church, celebrating sex, gambling, and drinking, but they've gained influence over many politicians.

 - Smith's Church of All Worlds evolves out of conversations with Harshaw about the role of religion in society and his subsequent study of several religions. Although it adopts some aspects of the

Fosterites, it also comes under attack from them. Smith incorporates into his church several ideas he learned from the Martians, including the idea of "grokking," a kind of instant powerful empathy, and the principle that he loosely translates as "Thou Art God."

» Somewhat to Heinlein's chagrin, these ideas, which were likely intended as comments on the nature of religious belief, were cheerfully adopted by the 1960s counterculture, and an actual Church of All Worlds was founded in 1962, describing itself as a "neo-pagan" religion and still surviving, more or less, to this day.

- In contrast to Heinlein's Church of All Worlds, Octavia Butler's Earthseed religion, as outlined in her novels *Parable of the Sower* and *Parable of the Talents*, seems a fairly modest but thoughtful attempt to reconcile some of science fiction's traditional themes with religious expression. Earthseed involves the idea that the destiny of humanity is to move off the Earth and seed the universe.

Writer Octavia Butler once said in an interview: "Getting to the stars is such a nonlogical thing to do that it almost requires a nonlogical thing like religion to do it."



» *Parable of the Sower*, which introduces Earthseed, has its own version of grokking. The main character, Lauren Olamina, suffers from a rare disorder called hyperempathy, which causes her to viscerally feel the pain and pleasure of others. This clearly influences the development of Earthseed, which is a non-revelatory, non-supernatural religion, developed in Lauren's teenage years, as her society collapses around her both economically and environmentally.

» Drug-induced arson, murder, rape, even cannibalism occur as Lauren's gated community fails and she finds herself in a long stream of refugees. The daughter of a minister, Lauren is increasingly dissatisfied with the inability of existing religious beliefs to provide a usable model for moral choices in a world that seems out of control. "God is change" is the motto of Earthseed, which emphasizes adaptability, diversity, and—as its only transcendental goal—the eventual colonization of other worlds.

» But the gentle Earthseed is not the only kind of religion Butler wants to explore in these novels. *Parable of the Sower* is set several years later and seen partly from the viewpoint of Lauren's grown daughter, Larkin. Earthseed has grown and formed a community called Acorn, but it is later raided and converted into a concentration camp by a group called Christian America.

» Butler's unfinished third novel, *Parable of the Trickster*, would supposedly have shown Earthseed's followers finally escaping Earth and facing the problems of establishing a new society. But in a sense, she had already done what she wanted to do in the first two novels: to imagine a gentle and tolerant religion that reflected one of science fiction's oldest dreams and one of its central principles—change—and to show us the destructive potential of religion when it becomes an instrument of intolerance and repression.

Readings

Heinlein, *Stranger in a Strange Land*.

Russell, *The Sparrow*.

Silverberg, ed., *The Science Fiction Hall of Fame*, vol. 1.

Wolfe, ed., *American Science Fiction*.

Questions

1 An interesting and influential early work of intellectual history, Andrew D. White's *A History of the Warfare of Science with Theology in Christendom* (1896) explored the notion that many religious beliefs proved incompatible with science and that history revealed a gradual liberation of scientific thinking from the bonds of religious belief. How have science fiction writers addressed this schism in such works as *A Case of Conscience* or *The Sparrow*?

2 What are some of the narrative purposes of invented religions, such as Heinlein's Church of All Worlds and Butler's Earthseed? How are these similar to and different from actual received religious beliefs?

LECTURE 15

Science Fiction's New Wave



Literary and artistic movements, with their various proclamations, manifestoes, speeches, and editorials, are always revolutionary, exciting, energizing, and destined to change everything forever—at least to the people who are in the middle of them. Years or decades later, of course, they may simply seem products of their time or minor offshoots of larger cultural traditions. For most of its history, science fiction developed as a kind of commercial literature whose authors, trying to make a living by selling stories, simply didn't have time for movements and manifestoes. But by the post–World War II era, science fiction had developed identifiable traditions that new writers could seek to overthrow.

New Science Fiction Magazines

- Two important science fiction magazines emerged in the 1950s, each with an identifiable agenda.
 - In 1949, Anthony Boucher and J. Francis McComas founded *The Magazine of Fantasy* (later *The Magazine of Fantasy and Science Fiction*). By combining science fiction, fantasy, and horror stories with reprints of classic or little-known stories by literary figures, the editors sought to bridge the gap between genre and literary fiction.

 - Only a year later, *Galaxy Science Fiction* debuted under H. L. Gold, whose editorial choices emphasized social and satirical science fiction over Campbell's favored form of technological extrapolation, leading to the publication of some of the most influential science fiction satires of the era.

- One of the principal British magazines began life as a fan magazine called *Novae Terrae*. Its editor, E. J. Carnell, changed the title to *New Worlds* in 1939 and converted it to a professional magazine in 1946. Unfortunately, the magazine folded after only three issues, but it was revived in 1949 and, this time, lasted until 1964. It was then rescued by another publisher, and its new editor became Michael Moorcock, a young fan of *New Worlds*.

- From Moorcock's first editorial, he virtually promised a renaissance of science fiction writing—"a kind of SF which is unconventional in every sense." The model for that renaissance, celebrated in an essay by J. G. Ballard in the same issue, was the controversial and deliberately transgressive work of William S. Burroughs, the American author of *Naked Lunch*.
 - For most of its history, science fiction had not engaged very much with what was generally regarded as literary culture, let alone with experimental or avant-garde movements. Burroughs, who had been a prominent figure in the Beat movement of the 1950s, gained even wider influence during the psychedelic era of the 1960s and 1970s. He eventually seemed to get his tendrils into science fiction, even though he seldom had much direct interaction with the science fiction community.

 - We can find aspects of Burroughs in everything from the later novels of Philip K. Dick to the cyberpunk movement of the 1980s, but his earliest and most direct influence was on the New Wave authors promoted in Moorcock's *New Worlds*.

The New Wave and "Inner Space"

- Moorcock didn't label his intended revolution the New Wave. In fact, the term had already come into use by American reviewers before Moorcock even took over *New Worlds*. In 1961, P. Schuyler Miller, the longtime reviewer for *Astounding*, had used it to describe younger British writers, such as Brian W. Aldiss and John Brunner, whose work

had already begun to exhibit some of the spirit of experimentation that would be characteristic of the New Wave.

- Brunner, for example, wrote the 1968 classic of overpopulation *Stand on Zanzibar*, which was peppered with snippets of headlines, vignettes about minor characters, ads, and other collage-like elements designed to give a dense texture to the complex future world he was presenting.

- For his part, in 1962, Aldiss completed his *Report on Probability A*, a rather abstract piece strongly influenced by the French "new novel" movement, which largely sought to replace interpretive narration with objective description.

- But the writer mostly directly associated with Moorcock's vision of a new, speculative fiction was J. G. Ballard. Even before Moorcock took over the magazine, Ballard had published an editorial titled "Which Way to Inner Space?" in which he argued a concept that defined much of his work and a good deal of the New Wave in general.
 - "Inner space" suggested a focus on psychological states and perception, as opposed to the outer space adventures of much previous science fiction. This focus became clear in a series of bizarre disaster novels that Ballard published early in his career, including *The Wind from Nowhere* (1961), *The Drowned World* (1962), *The Burning World* (1964, later retitled *The Drought*), and *The Crystal World* (1966).

 - Ballard's later novels would move even further from the traditional materials of science fiction. In the 1970s, an informal trilogy that began with *Crash* explored the dehumanizing effects of a highly urbanized, motorized society. The novel describes a group of people whose sexual fetish is being in a car crash.

 - A crash was also central to Ballard's next novel, *Concrete Island* (1974), in which an architect crashes his Jaguar and finds himself stranded in an area between the intersection of two busy highways.

Although he expects to be rescued, the highways are so dangerous that he can't escape and eventually connects with other characters who are also stranded there.

» The final novel in this group, *High Rise* (1975) tells of what happens in an almost entirely self-contained luxury high rise when things start to go wrong, such as power failures. The inhabitants revert to an almost primitive, warlike state, and the lower, middle, and upper classes become literal descriptions of what floors people live on.

Representatives of the New Wave

- Ballard's "The Terminal Beach" (1964) is an almost plotless but emotionally resonant tale. In it, a man named Traven, grieving over the loss of his wife and young son in an auto accident, has made his way to the Eniwetok Atoll in the Pacific Ocean, the site of the earliest hydrogen bomb tests in the early 1950s and of a naval battle during World War II.

Traven, the protagonist of Ballard's "The Terminal Beach," finds himself caught not only between the deaths of his wife and son and his own death but also between the bombings and nuclear tests of the World War II era and the fear of what a third world war might make of the world.



- Wandering through the long-abandoned concrete bunkers, Traven comes across evidence of both events: mannequins with faces melted by the heat, sand fused into glass, and a pile of B-29 Superfortress bombers.

- He occasionally seems to see his wife and son looking at him from a distance. Toward the end of the story, he comes across the desiccated corpse of a Japanese man, whose presence on the island is as mysterious as Traven's own.

- The meaning of the story emerges through Traven's ruminations about the island and what he calls the "Pre-Third"—the period after 1945 but presumably before the Third World War. He thinks of this bleak concrete landscape as a kind of geological evidence of what the future may look like. The landscape is also a quite literal image of the inner space—as opposed to outer space—that Ballard and other New Wave writers argued should be the focus of science fiction.

- Pamela Zoline's "The Heat Death of the Universe" is about a day in the life of a California housewife named Sarah Boyle. She prepares breakfast for her children, shops for a birthday party, cleans the house, and after the party is over, begins to disintegrate. She throws a carton of eggs on the floor, writes odd things on the walls, and begins to break glasses and dishes in the kitchen.
 - This sounds like a sad but ordinary story of a frazzled housewife—except for the manner of its telling. Zoline arranges the story in 54 numbered paragraphs, many with headlines or subtitles. Some are obvious, such as "Cleaning Up the House" or "Birthday," but others seem odd, such as "On Entropy" or "The Heat Death of the Universe." Further, the story often lapses into scientific language describing the second law of thermodynamics.

 - Zoline writes: "It has been held that the Universe constitutes a thermodynamically closed system, and if this were true it would mean that a time must finally come when the Universe unwinds

itself, no energy being available for use." We realize that Sarah's household is a similar closed system, tending from order to disorder as the entropy of the system increases.

- Her repeated efforts to keep the house clean are, essentially, efforts to fight against this entropy, and there is evidence that much the same is happening in Sarah's mind. Her final unraveling might be seen as a surrender to the entropy that has been encroaching on her life throughout the story.

- What makes such stories as "The Terminal Beach" and "The Heat Death of the Universe" science fiction? Neither story seems to be set in the future, and neither involves the traditional machinery of science fiction, such as robots or spaceships.
 - The debate about the genre of these stories remains unsettled, but there seems little doubt that both Ballard and Zoline used some of the ideas of science fiction to explore inner space—the internal stresses and anxieties of the characters; in so doing, they reflect much of what the New Wave was really about.

 - Instead of viewing science fiction as a set of familiar images and plots, Moorcock and his allies seemed to argue, science fiction could be seen as a way of exploring the alienation of characters who find themselves trapped in some way. New Wave science fiction is more what we might call an angle of vision rather than a set of recognizable formulas.

Tradition versus the New Wave

- The New Wave generated the most bitter controversy science fiction had seen in decades, but unlike earlier controversies that centered on fannish rivalries or cheating editors, this one was really about the nature of the literature and what it might become. Some important writers, reviewers, and editors lined up firmly in the camp of the skeptics, while others tended to view it as a way of further liberating science fiction from its pulp origins.

- And this sense of liberation wasn't confined to British science fiction. In 1967, the popular American writer Harlan Ellison published *Dangerous Visions*, an anthology of 33 original stories that included not only traditional science fiction writers but also those associated with the New Wave and with experimental fiction. In his words, Ellison's book "was conceived out of a need for new horizons, new forms, new styles, new challenges in the literature of our times."

- Did Michael Moorcock's *New Worlds* and Ellison's *Dangerous Visions* really help transform science fiction, or did they simply reflect a shift that was starting to happen anyway? There seems little doubt that science fiction was becoming more adventurous in the literary sense and more diverse in its sensibilities, a process that continued long after these controversies died down.

Readings

Ballard, *Crash*.

Blish, *A Case of Conscience*.

Greenland, *The Entropy Exhibition*.

Questions

1 The criticism forwarded by such editors as Michael Moorcock and Harlan Ellison in the 1960s—that science fiction could be imaginatively radical while remaining conservative and conventional in terms of literary technique and values—is one that is still leveled against many forms of popular narrative. Do the formally experimental modernist and postmodernist works of the 1960s, in science fiction or elsewhere, now seem more like historical artifacts, or do the innovations remain striking and provocative?

2 Some works of the New Wave and later, such as Ballard's "The Terminal Beach" and Zoline's "The Heat Death of the Universe," seem to blur the line between science fiction and conventional narrative, in that nothing particularly futuristic or speculative happens in either story. Is it possible to conceive of the science fiction genre in a way that focuses on techniques and literary strategies rather than on new inventions, alien encounters, or futuristic settings?

LECTURE 16

Encounters with the Alien Other

We've already seen a couple of icons—robots and spaceships—that seem to embody much of science fiction's appeal and sense of wonder. The concept we'll explore in this lecture—the alien or Other—is a good deal more slippery than those but certainly no less important. In a science fiction context, *alien* immediately suggests a creature from outer space, usually an intelligent and not very friendly one. Why is it that so many science fiction aliens are presented as monstrous or hostile? The answer may be traced to some of the anxieties that were dominant when science fiction began to emerge as a genre in the 19th and 20th centuries.

Aliens as Symbols of Fear

- We can almost trace the changing social fears of the 20th century by examining how we regarded aliens in science fiction stories. First, there were fears of invasion, often by non-white peoples; then, fears of contamination and infection, as in *Dracula*; then, fears of losing out to more advanced technologies, as in Wells. By the Cold War era, with its fears of communism and brainwashing, aliens became images of mind control and loss of will, as in Heinlein's *The Puppet Masters*.



- The classic treatment of aliens who are even more frightening because they look like us is John W. Campbell, Jr.'s 1938 short story "Who Goes There?" Here, researchers at a scientific facility in Antarctica find an alien spaceship, apparently frozen for millions of years, and inadvertently thaw out its inhabitant. This turns out to be an alien that can assume the form and memories of any creature it meets.

- Jack Finney's *The Body Snatchers* is another story that deals with aliens who resemble us and addresses the same existential concern as the Campbell story—namely, how would you prove that you are you, and how can you tell if your friends and colleagues are really who they say they are?
 - The premise behind *The Body Snatchers* is that some sort of alien spores have arrived on Earth and developed into giant seed pods; each pod grows an exact replica of a particular human being, after which the original is destroyed and replaced.

 - The setting is a small town in California, where the local doctor finds an increasing number of his patients claiming that their wives, husbands, children, or coworkers seem "different." The doctor realizes that the town is gradually being taken over by alien replicas, who seem to share a sort of group mind and are completely without emotion.

 - It's tempting to read Finney's work as a metaphor for all sorts of groupthink and, in the early 1950s, as alluding to communism in particular. But Finney repeatedly claimed that his story was nothing more than a suspense thriller. Thus, *The Body Snatchers* reveals one of the uses of aliens in science fiction stories: as a kind of screen onto which we can project all sorts of anxieties and fears, political, social, and even personal.

"First Contact"

- The conventional shorthand for the initial meeting between humans and aliens is "first contact," a phrase popularized by Murray Leinster's 1945 short story with that title. Unlike earlier first contact stories, Leinster's is neither an invasion tale nor a story of exploration and colonization. Instead, Leinster imagines that a spaceship crew encounters another spaceship from an alien civilization, neither ship knowing where the other came from or whether the crew might be friendly or hostile.

- This approach reduces the alien encounter narrative to its most fundamental problems: how to make contact, whether to attempt contact, and whether aliens can be trusted. As the captain of the Earth ship points out, "Failure to be suspicious might doom the human race,—and a peaceful exchange of the fruits of civilization would be the greatest benefit imaginable."

- The dilemma of whether or not to make contact is resolved in a rather ingenious if unlikely way: The two spaceship crews decide to disable the tracking mechanisms and destroy the navigational charts on their own ships, then swap. This way, each civilization can benefit from the technology of the other, without facing the risks mentioned earlier.

Other Contact Stories

- The issue of communication identified in Leinster's story is one of the most interesting recurring problems in tales of alien contact. How do we determine if a set of signals constitutes a language? How do we identify an alien being as intelligent—or even alive? And should we encounter a civilization equal to or more advanced than our own, how could we preserve our own safety?

- These are some of science fiction's most profound questions, and they were addressed in a 1974 novel by Larry Niven and Jerry Pournelle, *The Mote in God's Eye*.



Pulp science fiction typically addressed the problem of communicating with aliens through a universal translation machine; later writers have explored this question on a much deeper level.

- In the 31st century, humanity has established a vast galactic empire but has yet to make contact with an intelligent alien species. That changes suddenly when Rod Blaine, a spaceship commander, is assigned to investigate what appears to be an alien spaceship near an astronomical anomaly called the Mote in God's Eye.

- Again, the question arises of how to make contact while retaining security, but in this case, the inhabitant of the alien ship is found dead, and the humans are able to track the ship back to its home planet. Much of the rest of the novel is devoted to describing the various subspecies of the Moties, as they come to be called; what emerges is a violent history of civilizations that rise to technological heights only to be reduced to primitive states by an uncontrollable urge to wage war.

- A novel published in Poland, Stanislaw Lem's *Solaris*, seriously began to reconsider the question of alien intelligence from a literary point of view and to ask whether we could ever hope to understand it at all.

- *Solaris* describes one of the most remarkable alien intelligences in science fiction—a planet almost entirely covered by an ocean of some sort of viscous, water-like substance that sometimes seems to be a single living intelligence. Decades before the novel opens, scientists established a research station floating above the planet's surface to study the ocean and determine if it is intelligent in any way that we can understand.

- When the crew members of Solaris Station try a new experiment of bombarding the ocean with powerful X-rays, it responds by creating exact replicas of people, drawn from the memories of the crew, that seem to be associated with especially painful parts of their past.

- The main character, psychologist Kris Kelvin, has just arrived at the station, and his "visitor," as they are called, turns out to be his wife, Harey, who committed suicide after he ended the marriage.

- Although we gain evidence of significantly advanced technological capabilities on the part of Solaris, we never learn why it is using memories against the humans or, for that matter, what its motivation is at all. At the end of the novel, it seems that we might be able to detect higher intelligence when we see it, but the notion of being able to communicate meaningfully with such an alien is all but hopeless.

Aliens as Blank Slates

- What Lem makes explicit in *Solaris* is something that science fiction writers and some moviemakers had been demonstrating for some time: the idea that the alien provides us with a convenient blank slate, a kind of *tabula rasa*, onto which we can project any number of hopes, fears, and dreams.
 - On a literal level, the figure of the alien simply means that we are not alone in the universe, which of course, is a key idea throughout the history of science fiction.

- On a more metaphorical level, the alien can represent that which we don't understand or can understand only by superimposing our own prejudices and beliefs onto it. In this latter sense, some writers have found in the alien a powerful image of alienation.

- On the surface, Karen Joy Fowler's *Sarah Canary* (1991) doesn't look much like science fiction. It begins when a strange but well-dressed woman walks out of the forest into a Chinese railway workers' camp in 1873 in what is now the state of Washington. She doesn't speak but makes strange warbling or clicking sounds.
 - Ultimately, the woman is confined to a mental asylum, where another inmate calls her Sarah Canary because of the odd sounds she makes. Sarah's background remains mysterious. Some speculate that she is a feral child raised by animals, or a well-to-do wife escaping a bad marriage, or some sort of supernatural figure. Or, for all we know, she might be an alien.

 - Because of the various ways Sarah is perceived and the fact that establishing meaningful communication with her seems impossible, some critics have viewed the novel as a brilliant but subtle example of the first contact theme, and Fowler herself has made statements that seem to support this. Her novel raises the broader question of whether we would even recognize an alien intelligence if we saw one.

- In "The Women Men Don't See" (1973), written by Alice Sheldon under the name James Tiptree, Jr., a woman named Ruth and her daughter are involved in a small plane crash in the Yucatan peninsula, along with a male narrator, Don.
 - In the course of the story, when the topic of women's roles comes up, Don expresses a kind of clueless skepticism about what he calls "women's lib." In probably the most famous line of the story, Ruth explains, "What women do is survive. We live by ones and twos in the chinks of your world-machine." In other words, she already feels like an alien in a man's world.

» In an odd twist, the story turns into one of first contact when Ruth and Don discover a group of extraterrestrials who have landed their spacecraft in the jungle and are preparing to depart. Don, of course, wants to save the girls from the invading aliens, but Ruth surprises him by begging the aliens to take her and her daughter with them. Even a completely unknown planet seems more attractive to her than returning to her drab and powerless life in "the chinks of the world-machine."

» "The Women Men Don't See" presents the aliens neither as threats nor benefactors, and in fact, the aliens themselves are less important to the narrative than the sense of *being* an alien that Ruth already feels in a male-dominated world. Tiptree's story is a powerful statement about the creative ways in which science fiction writers can use the narrative tradition to show us things about ourselves and to ask questions that perhaps we ourselves had not thought of asking.

Some of the anxieties that were dominant when science fiction began to emerge as a genre in the 19th and early 20th centuries may have contributed to our pervasive cultural concept of aliens as hostile or Other.



Readings

Finney, *Invasion of the Body Snatchers*.

Fowler, *Sarah Canary*.

Lem, *Solaris*.

Silverberg, ed., *The Science Fiction Hall of Fame*, vol. 1.

Tiptree, *Her Smoke Rose Up Forever*.

Questions

1 Aliens in science fiction may range from scary monsters from outer space to people who look and behave very much like ourselves, but what do such images as the shapeshifting monster from "Who Goes There?" have in common with the strange woman in *Sarah Canary*? Is the alien mostly a distorting-mirror reflection of ourselves or an image of the ineluctable Other?

2 In *Solaris*, Stanislaw Lem raises the question of whether we can ever effectively communicate with or make sense of a possible encounter with the truly alien. Are such concepts as intelligence and communication truly universal, suggesting that no matter how many different life forms we encounter we should be able to interact with them? Or are these concepts contingent on our own evolution, with the possibility that different patterns of evolution would forever make meaningful communication impossible?



LECTURE 17

Environmentalism in Science Fiction

As we've seen, science fiction deals with the consequences of human actions—often, with consequences that are unintended and unanticipated. Build robots to take over unpleasant tasks, and you might create an oppressed working class that could revolt; develop treatments that will increase lifespans, and you may have a population problem; and so on. These scenarios are largely hypothetical, but one that's not is the impact of human action on the environment. Issues here range from global climate change to the evolution of antibiotic-resistant "superbugs." In this lecture, we'll explore whether science fiction writers saw any of this coming, how they have treated environmental issues in their fiction, and how they are responding, if at all, to current crises.

Science Fiction and Environmental Issues

- *The Blood of Angels* (2014), by the Finnish novelist Johanna Sinisalo, depicts a world plagued by food shortages. The catastrophes Sinisalo describes are the result of the failure of pollination owing to the rapid spread of colony collapse disorder—a real-world malady that causes honeybees to abandon their hives and may, in part, be caused by the use of pesticides.

- If the mere effort to control insects can lead to such apocalyptic scenarios, what might science fiction writers make of larger projects that might alter the environment irrevocably? The surprising answer is: not as much as you might think—at least not until the past few decades.

- One problem, of course, is that changes to the environment tend to be incremental and, thus, challenging to dramatize in the framework of a novel or story. Another is that the evidence supporting the science behind such changes can be equally slow to accumulate.

- Possibly even more problematic is that such issues can easily get entangled in ideological or economic arguments. As we've seen, the overwhelming evidence of climate change has gotten caught up in political debates over jobs and corporate profits.

- Finally, much of classic science fiction seemed so enamored of physics, astronomy, and engineering that biological and ecological themes had a somewhat more difficult time gaining a foothold among writers, editors, and readers.

- In 1972, Philip Wylie—a gadfly writer—published his last novel, *The End of the Dream*, a deeply cynical work in which the human race is nearly wiped out by a succession of disasters caused by just about every environmental threat imaginable: a nuclear reactor spill, a leak from a chemical plant, and so on.
 - Told in the form of excerpts from various documents and reports, the novel is deliberately cast as a jeremiad—a lamentation on the state of the world and a call for rapid action before the spiraling cataclysms reach a point of no return. But in trying to list so many environmental horrors in one fairly short novel, Wylie runs the risk implicit in all such jeremiads: overkill.

 - Read today, the novel seems an odd mixture of impressive foresight on the one hand and sensationalist fear-mongering on the other. The problem with such environmental activist fiction is to make the situation dramatic enough to hold the reader's attention, without making it such an excessive horror story that it strains credibility.

- Although it also draws on elements of horror stories, John Brunner's *The Sheep Look Up* (1972) is a much more effective novel. Brunner was a British writer who made a splash with *Stand on Zanzibar* (1968), a novel dealing with overpopulation. The work was noted for introducing modernist techniques into the science fiction novel, such as random vignettes, headlines, newscasts, and advertisements. *The Sheep Look Up* retains some of these techniques; as a result, Brunner's world seems more convincing than Wylie's.
 - Set in late-20th-century America, *The Sheep Look Up* depicts a world ravaged by pollution, tainted food and water, crop failures, pesticide-resistant invasive species, and similar disasters. Environmentalism has become a kind of underground guerilla movement, while the government is in thrall to the very corporations responsible for the deteriorating environment.

 - Eventually, a single catastrophe precipitates massive civil unrest. The water supply of Denver is poisoned, and after the president blames it on domestic terrorists, the truth emerges that the water was poisoned by a leakage of improperly stored nerve gas from a government facility. The leader of the underground environmental movement emerges from hiding but is killed by a bomb planted by one of his followers, and the novel ends on a decidedly grim note.

The world portrayed in some science fiction novels dealing with environmental issues is frighteningly close to our own.



- Sadly, there seems little evidence that either Brunner's novel or Wylie's did a great deal to change our actions or attitudes toward the environment. Both were dismissed by many critics as hysterical fear-mongering, although Brunner's novel has been rediscovered as being more prescient than Wylie's. Later writers, then, would more often focus on what we might call the special effects—the dramatic disasters themselves—than on the more complex systems and societal practices that might lead to such disasters.

The Word for World Is Forest

- Ursula K. Le Guin's classic *The Word for World Is Forest* (1976) describes a military-led colonization and partial deforestation of a lush, forest-covered world, reflecting not only Le Guin's ecological concerns but her response to what she viewed as the exploitative nature of the Vietnam War.

- The local population, the Athsheans, live completely in balance with the natural world and—having no conceptions of ownership, war, or slavery—are easy targets for the brutal military captain who supervises the colony. His rape of a local woman finally pushes the Athsheans to begin to fight back, first by attacking a logging camp—because, for the Athsheans, the destruction of the forests is tantamount to destroying the world.

- The title of the story comes from an observation made by a human anthropologist: Although our word for *world*—*earth*—is the same as our word for *dirt*, the Athsheans' word for *world* is the same as their word for *forest*. As an added irony, one of the main reasons for colonizing other worlds is that Earth itself has suffered massive environmental damage, leading to mass starvation and a kind of dystopian existence.

Science in the Capital

- Kim Stanley Robinson's most direct engagement with issues of environmental policy is a trilogy of near-future novels, collectively called Science in the Capital (2004–2007). Here, Robinson takes on the realities of the relationships among science, politics, and capitalism in what may seem like a straightforward political novel.

- The science fiction elements in the book are simply extensions of processes that seemed already underway when Robinson wrote the novel. The Gulf Stream seems to be shutting down, for example, which would mean a climate catastrophe for northern Europe. But the novels aren't without spectacle.

- Toward the end of the first novel, *Forty Signs of Rain*, massive storms flood Washington and devastate the California coastline. The second novel, *Fifty Degrees Below*, focuses largely on possible solutions, such as efforts to restart the Gulf Stream and to remove carbon from the air. In the final novel, *Sixty Days and Counting*, a new president is elected, and it seems as if some action might finally take place—if it's not already too late.

- Far from dry policy debates, these are, in fact, fully realized literary novels that demonstrate persuasively how a good science fiction writer can use the resources of literature to address crucial issues without resorting to the easy technological fixes seen in some earlier science fiction.

Shadow's End

- *Shadow's End* by Sheri S. Tepper is a direct expression of an emerging movement called *ecofeminism*, which seeks to unite ecological and feminist concerns. Ecofeminism embraces a range of ideas and philosophies, including the idea that the same attitudes that led to the suppression of women are behind the exploitation and destruction of the environment.

- *Shadow's End* takes place on a series of far-future worlds: Earth, which has been completely "homo-normed," its native species destroyed and their DNA patterns kept in storage; Dinadh, home to a patriarchal tribal society; Kamir, whose idealistic king is powerless to stop the destruction of the remaining natural environment; and Perdur Alas, an outpost for colonization that has yet to feel the destructive hand of humanity.

- Homo-norming turns out to be a reflection of what Tepper calls the "Firster" philosophy, which maintains that the universe was made for man and, therefore, should be reshaped to fit his needs. A recurring theme in Tepper is the notion that the natural world is there for our own alteration and subjugation and that the male imperative to dominate and alter the environment extends to include the domination of women.

- Tepper's novels are informed by such passion they become almost biblical morality tales, and the end of this novel—in which the source of a mysterious plague that has been wiping out human colonies on various planets is revealed—is almost mythical in its scope.

The Water Knife

- Of younger contemporary writers, Paolo Bacigalupi has most consistently hammered at issues of global warming, agribusiness, the exhaustion of natural resources, and environmental degradation. *The Water Knife* portrays a future southwestern United States in which the so-called water wars have nearly become literal wars. The central character is an ex-convict working as a "water knife" for the city of Las Vegas; his job is to cut off water supplies to communities in the Colorado River basin so that the water can be used to maintain the lush indoor environments ("arcologies") that have become the heart of the future Las Vegas.

- The first scene in the novel depicts a nighttime helicopter raid to destroy the water-processing plant of a community that has just lost a court decision on water rights, changing the entire population into water-starved refugees overnight. In contrast to Las Vegas, Phoenix, Arizona,

has become a drought-ravaged dustbowl. Texas has been virtually destroyed, the federal government seems powerless, and states have set up border militias to keep refugees from flooding in from even more desperate neighboring states.

- Bacigalupi's premise is based on the simple fact that the Colorado River basin doesn't have enough water to continue to supply the agriculture and urban communities that depend on it. But despite the strong ecological message and the elements of a thriller, *The Water Knife* is also grounded in solid science fictional speculation. The arcologies that dominate Las Vegas, for example, are a version of actual plans for massive high-rise cities proposed by the Italian architect Paolo Soleri in the 1960s.

- Perhaps more than any other single theme, the environment shows how both extremes of science fictional futures can work together: the fear that we may end up in a diminished, post-apocalyptic world and the hope that we may be smart enough to see the warning signs and act on them before it's too late.

Readings

Bacigalupi, *The Water Knife*.

Brunner, *The Sheep Look Up*.

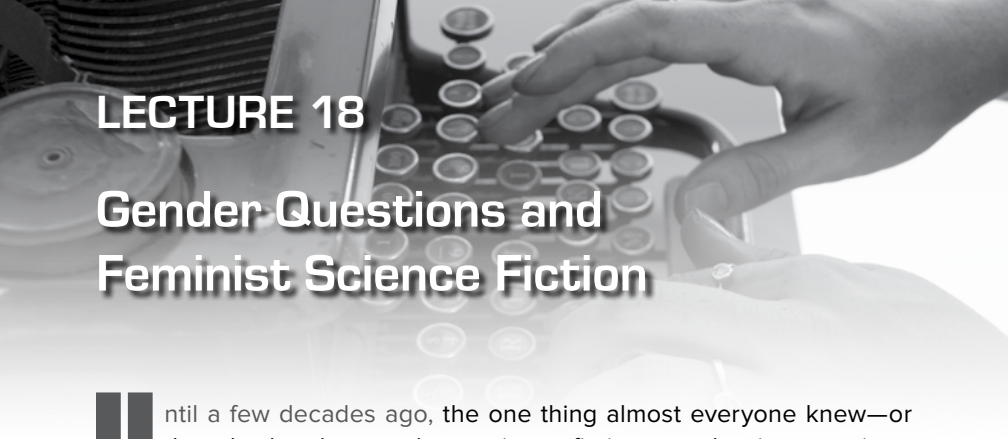
Le Guin, *The Word for World Is Forest*.

Robinson, *Forty Signs of Rain*.

Questions

1 Science fiction writers have been discussing the greenhouse effect for decades, and the more recent term *global warming* is practically a given in contemporary science fiction's views of a future Earth. But in warning about the possible effects of processes that are already underway, do writers run the risk of sensationalizing these real-life risks and leading readers to suspect that meaningful action is already hopeless, or can imaginative literature actually change attitudes and actions on such matters?

2 Kim Stanley Robinson's approach to pressing environmental issues in his Science in the Capital novels focuses on careful character development and actual policy issues involving the National Science Foundation, while Paolo Bacigalupi's *The Water Knife* is largely a thriller, with helicopter raids, secret documents, and corporate villains. Which seems the more effective strategy in persuading the reader of the importance of the issues underlying each novel?



LECTURE 18

Gender Questions and Feminist Science Fiction

Until a few decades ago, the one thing almost everyone knew—or thought they knew—about science fiction was that it was written by and for adolescent and post-adolescent males. The stereotype of the science fiction fan was that of a bright, geeky boy, awkward in relationships, who sought escape from his rather dull life in books, movies, comics, and games. As with all stereotypes, it's not hard to find boys who seem to check off all these boxes, but then it's not hard to find girls who check off most of them, as well. How, then, did science fiction come to be viewed as a predominantly male genre? We'll explore that question in this lecture.

Women's Historical Relationship to Science Fiction

- A kind of narrative has emerged about the relationship of women to popular American science fiction. According to this narrative, there have always been some women readers and fans of science fiction, but the overwhelming gender bias of the field was such that early women writers for the pulp magazines could succeed only if their names were gender-ambiguous, such as Leslie F. Stone, C. L. Moore, and Leigh Brackett.

- Although there were a number of successful women writers and editors in the field, science fiction seldom questioned accepted gender roles and avoided questions of sexuality. Two dramatic exceptions to this rule were Philip Jose Farmer's 1953 novella *The Lovers*, which touches on interspecies sex, and Theodore Sturgeon's *Venus Plus X*, which portrays a post-gender androgynous society that outrages a visitor from our own time.

- All this began to change rapidly in the 1960s and 1970s. In 1969, Ursula K. Le Guin's *The Left Hand of Darkness* depicted a society whose members had both female and male sexual characteristics, assuming one role or the other only once a month when they enter a sexually receptive state.

- Le Guin was far from alone in questioning the gender roles that had gone unquestioned for most of the history of science fiction. In an influential essay in 1970, "The Image of Women in Science Fiction," the novelist and critic Joanna Russ pointedly took the field to task for its failure to address such issues or even to feature significant women characters.
 - In 1975, Russ herself published a novel that brought the passion and anger of the growing feminist movement into science fiction. *The Female Man* describes four alternate societies, with a variation of the same character in each.

 - One closely resembles the America of the 1970s, with Joanna trying to assert herself in a male-dominated society. Another is a world in which the Great Depression never ended and World War II never happened; this world features Jeannine, who can see no future for herself other than marriage. The third society, Janet's, is set in a far future where men have been extinct for centuries and women live and reproduce together in relative harmony. And the fourth society, Jael's, is one in which men and women have been at war for decades.

 - In describing these societies, Russ is almost offering a catalogue of ways in which science fiction might—but had mostly failed to—address the various roles of gender in forming future or alternative societies. In so doing, she produced another classic of feminist science fiction.

- A series of novels by Suzy McKee Charnas known as the Holdfast Chronicles is an even more ambitious exploration of possible alternatives to traditional patriarchy and, in some ways, is even more brutal in its depiction of a literal war between the sexes. The first book in the series, *Walk to the End of the World* (1974), was shocking for at least

two reasons: its unrestrained vision of male savagery and its application of sophisticated science fiction techniques to the creation of a densely textured, nightmare dystopia derived from the social anxieties that helped give rise to the feminist movement.

- The 1970s saw influential stories from the most enigmatic science fiction writer of the decade. James Tiptree, Jr., had begun publishing stories at the end of the 1960s and, within a few years, became one of the most respected short fiction writers in the field, although no one seemed to know who he actually was.
 - Confusing matters further was the strong feminist slant of his best tales. "The Women Men Don't See," for example, suggested that some women might feel so alienated and powerless in our society that they would choose to board an alien spaceship for an unknown planet rather than return to their jobs.

 - In *Houston, Houston, Do You Read?*, three male astronauts find themselves in a society in which a plague has wiped out all men, and the remaining females sustain themselves by cloning. The astronauts react in rather predictable ways: One sees himself as a kind of savior destined to reintroduce traditional family structures, while another imagines that he's in a kind of *Playboy* fantasy, with thousands of women at his disposal.

 - In 1977, Tiptree was revealed to be Alice Sheldon and went from being one of the most mysterious figures in science fiction to one of the most colorful—a Ph.D. psychologist, artist, art critic, and former army intelligence officer.

Contemporary Views of Women and Science Fiction

- It would be tempting—but seriously misleading—to conclude that with the work of these and other authors since the 1970s, what had once seemed segregated as "women's" or "feminist" science fiction became part of the mainstream. Further, the narrative we've traced—of women

as anonymous readers in the 1930s, pseudonymous writers in the 1940s and 1950s, and revolutionaries in the 1960s and 1970s—suggests that the issues of discrimination, marginalization, and stereotyping have mostly been resolved. As most women writers and many women editors would tell you, this is far from the case.



MARGARET ATWOOD

- In addition, this narrative focuses fairly narrowly on the core science fiction community of readers, fans, awards, magazines, and writers who identify as science fiction writers, whereas there is a considerable history of the contribution of women writers, from Mary Shelley to Margaret Atwood, whose work was for the most part written and read outside of any identifiable science fiction community.

- Further, the issue of gender and gender identity covers a good deal more territory than can be addressed by simply totting up the number of women writers or the number of works that proclaim feminist viewpoints. We haven't really begun to address the question of gay, lesbian, bisexual, transgender, or ungendered writers, readers, and characters in science fiction. The culture of gender, it seems fair to say, is no longer as simply bimodal as it may have once seemed, and it's worth exploring how or whether science fiction can add much—or has added much—to this discussion.

- In addressing the first question—the classic problems of sexism—it's true that strong women characters and points of view are much more visible in written science fiction than they once were, but the same can hardly be said of science fiction film, television, or gaming or, for that matter, in the work of some male writers who feature female protagonists without pausing to consider their actual lives as women.

- Some writers feel that editors still view fiction dealing with the "hard sciences" of physics or astronomy as mostly appealing to a male readership, while "women's science fiction" is more likely to concern the biological or social sciences.

- A more subtle form of stereotyping is the assumption that women tend to write fantasy more than science fiction. In other words, those classic problems of sexism have hardly gone away.

- The second point reminds us that, whatever the considerable contributions of women to science fiction when it's defined as a genre or a community of readers, there are sometimes equally impressive contributions to the field going back all the way to what many regard as the first modern science fiction work, Mary Shelley's *Frankenstein*.
 - The all-female or female-dominant societies seen in Russ, Charnas, and Tiptree were prefigured by utopian literature of the late 19th and early 20th centuries, with such novels as Charlotte Perkins Gilman's *Herland* (1915) and Elizabeth Corbett's *New Amazonia: A Foretaste of the Future* (1889).

 - Even the hermaphroditic or ambisexual societies in such writers as Sturgeon and Le Guin were prefigured by Katherine Burdekin's 1934 novel *Proud Man*, in which a visitor from a peaceful future society that has erased class and gender divisions visits and critiques the comparatively stereotypical gender roles of 1930s England.

 - More recently, in a series of five mostly realistic novels collectively titled The Children of Violence, Doris Lessing traces the life of Martha Quest through the 20th century; the final volume, *The Four-Gated City* (1969), seamlessly moves into the future and World War III. A decade later, Lessing embarked on an equally ambitious five-novel series that was pure science fiction, the Canopus in Argos sequence, which includes contrasting portraits of dominantly feminine and traditionally masculine societies.

 - Apart from Lessing, the most significant literary figure of recent years to contribute to science fiction has been the Canadian author

Margaret Atwood. In her 1985 novel *The Handmaid's Tale*, Atwood imagines a brutally repressive militaristic society, based largely on Christian fundamentalist readings of the Old Testament. Because the fertility rate has been declining, these fundamentalists seize power in the United States in a violent coup and immediately suspend virtually all civil liberties for women, who are treated largely as a simple natural resource.

- Although science fiction has produced a number of such works in which gender roles are rigidly stratified and enforced, it has also begun to explore more fluid and complex ideas of sexuality and gender. For example, a 1998 story by Raphael Carter—an author who identifies as neither male nor female—is cast in the form of an article in a science journal. Its full title is "'Congenital Agenesis of Gender Ideation' by K. N. Sirsi and Sandra Botkin," and it purports to be a study of individuals who seem unable to process gender categories, effectively asking what happens in our brains when we identify something as one gender or another.

- Such questions take us well beyond the scope of science fiction to answer, but they also take us a long way from the old stereotypes, especially from that stereotype with which we started—the nerdy male fan of science fiction, afraid of sex and relationships in general, escaping into pulp magazines and movies with easily defined gender roles. It's a sign of science fiction's maturity that it's no longer afraid of asking those questions and a sign of its power that it can dramatize issues of gender and sexuality in a way that no other kind of literature can.



Readings

Attebery, *Decoding Gender in Science Fiction.*

Atwood, *The Handmaid's Tale.*

Charnas, *Walk to the End of the World.*

Larbalestier, *The Battle of the Sexes in Science Fiction.*

Lefanu, *In the Chinks of the World Machine.*

Le Guin, *The Left Hand of Darkness.*

Russ, *The Female Man.*

Tiptree, *Her Smoke Rose Up Forever.*

Questions

1 Although there have always been substantial numbers of female science fiction readers, women with any sort of real agency were comparatively rare in the fiction itself until the 1960s. Was this simply a reflection of the gender discrimination of society as a whole, or are there aspects of science fiction as a genre—its plots, settings, and major concerns—that seemed to render it less amenable to meaningful women characters?

2 Several science fiction works can be regarded as thought experiments depicting societies that were all female, societies with multiple or fluid gender and sexual roles, or societies in which characters are completely disembodied (as in uploads to a computer system, for example). Is gender a construct of biology and social conditioning, or is it an inherent trait of mind?

LECTURE 19

Cyberpunk and the 1980s

Cyberpunk is a movement that defined a large swath of science fiction during the 1980s. The word was coined by writer Bruce Bethke, who used it for the title of a story about teenage hackers. Even before the label became common, however, Bruce Sterling had advocated for a new kind of science fiction in his fanzine *Cheap Truth*, where he claimed, "American SF lies in a reptilian torpor." When Sterling came across a story called "Burning Chrome" by William Gibson, he wrote, "THIS is the shape for science fiction in the 1980s: fast-moving, sharply extrapolated, technologically literate, and as brilliant and coherent as a laser." In this lecture, we'll explore some of the high points of this movement.

William Gibson

- The cyberpunk movement gained recognition with the publication of William Gibson's *Neuromancer*, one of the most important science fiction novels of the 20th century. It is still a remarkable novel to read today, despite the facts that Gibson knew little about computer systems when he wrote it and the Internet itself was barely in its infancy at the time of publication. The main character, a kind of antihero named Case, views himself as a "console cowboy"—he must be linked to a physical computer system in order to hack into the virtual reality "matrix."



William Gibson

- As the novel opens, Case, a small-time hustler and drug addict who was nevertheless a skilled hacker, has been rendered unable to access the matrix. After he was caught stealing from his employer, a toxin was introduced into his system that prevented him from making a living as a hacker. He is now desperately searching for a cure among the illegal underground medical clinics in Chiba City, Japan, where he lives.

- Case meets Molly Millions, a tough, self-described "street samurai" with a number of weapon-like body modifications and mirror lenses implanted in her eyes. Through her, he also meets Armitage, a mysterious figure who offers to cure Case in exchange for using his hacker and criminal skills. Case and Molly begin to build a team under Armitage's direction, including stealing a computer module that contains the uploaded consciousness of a legendary hacker who had been one of Case's teachers.

- The plot gets increasingly complicated as Case and Molly learn the background and true identity of Armitage and the real goal of their mission, which involves a partial artificial intelligence (AI) called Wintermute, housed in a large mainframe computer in Switzerland. The creation of super-AIs has been banned by law, which means that Wintermute is only half of such an intelligence; it will become complete only when it can merge with another AI called Neuromancer, housed in a computer in Brazil.

- Case must enter cyberspace himself to enable Wintermute to join with Neuromancer, which will create a massive superhuman consciousness much like what later science fiction writers would come to call a *singularity*, a point at which computer intelligences would evolve without further human intervention or control.

- On a virtual beach, Case finally meets the AI called Neuromancer in the form of a little boy, who explains the multiple pun that is his name and the title of the book: "Neuro from the nerves, the silver paths. Romancer. Necromancer. I call up the dead." And indeed, as we see from the virtual personality of Case's former teacher surviving in the web, it can be a place not only for endless adventures and romance but where the dead might remain somewhat alive.



William Gibson is one of science fiction's leading coolhunters—people who write about how technological innovations might fit into the complex, media-saturated culture in which we live.

- *Neuromancer* seemed to challenge many of the cherished assumptions of classical science fiction, such as the notion that the future might be linear and manageable rather than a chaotic mix of government, corporate, and criminal rivalries with most citizens caught in the middle or the idea of the rational, ingenious hero who could always sort things out in the end. Gibson's future is messy, cluttered, ever-changing, and vaguely desperate, a far cry from either the clean, almost sterile lines of earlier future cities or the unrelieved misery of classic dystopias.

Bruce Sterling

- The fiction of the chief theorist of cyberpunk, Bruce Sterling, is noticeably more cool, cerebral, and political than that of Gibson, with much of the cyberpunk machinery kept in the background of more traditional science fiction ideas.

- Sterling began publishing in the 1970s and first made a name for himself with a series of stories (and one novel) set in a future solar system. His 1980 novel *The Artificial Kid* contained a number of what would become cyberpunk elements—an outsider kid with extensive body modifications who videos his street fights for the entertainment of the wealthy—but its setting on another far-future planet seemed to remove it from the more immediate earthbound concerns that cyberpunk would come to represent.

- Much closer to home, Sterling's 1988 novel *Islands in the Net* depicted a globalized economy united by something similar to the Internet and in which corporations are essentially more powerful than governments. Again, the novel includes such cyberpunk elements as designer drugs and body modifications, as well as some interesting technical innovations, such as videoglasses and watchphones.

- Similarly, Sterling's 1996 novel *Holy Fire* depicts a colorful 21st century in which intelligent dogs host television talk shows, computers are made of smart fabrics, whole city blocks are made of edible fungi, and virtual reality has advanced several generations to create a mystical, post-human alternative consciousness called "holy fire." But the main plot of the novel focuses on life-extension and rejuvenation technologies, and the time of the setting, the year 2096, seems a bit further into the future than most cyberpunk stories.

- Probably the most Gibsonian of Sterling's novels is his millennium novel *Zeitgeist*, which seems futuristic even though it is set in the recent past—1999, a year earlier than the book's publication. It feels, however, less like the recent past than what we might call the recent future.
 - Leggy Starlitz is a classic cyberpunk protagonist, and his latest scam is a manufactured international girl pop group called G7, whose replaceable members are referred to simply as "the German one," "the French one," and so on. They never even learn to sing because all their performances are lip-synched.

- The goal of G7 is to amass a fortune before the end of 1999, mostly by means of sold-out concerts and product tie-ins in Third World countries normally ignored by the pop music world. The group will then disband forever as Starlitz moves on to his next scheme.

- It's not surprising that cyberpunk often explores the world of media pop stars because so many of them, from the Monkees to Lady Gaga, are either fully manufactured or depend on elaborately managed media images.

Post-Cyberpunk and Post-Human Fiction

- By the 1990s, cyberpunk had become such a widely used term that it had just about escaped the bounds of science fiction altogether. It had also begun to give rise to a litany of literary subgenres described with *-punk* suffixes: post-cyberpunk, biopunk, nanopunk, cyberprep, mannerpunk, dieselpunk, atompunk, and even elfpunk (for a kind of fantasy). Most of these derived from the kinds of technology involved, particular historical periods, or simply the adaptation of the cyberpunk approach of alienated outsiders to other familiar genres of writing.

- Although cyberpunk and its derivatives evolved into trendy movements that became subcultures of their own, the movement never left science fiction behind entirely. In 1992, Neal Stephenson published *Snow Crash*. This work combines aspects of cyberpunk, absurdist comedy, and such provocative ideas as the notion that belief systems, including religion, can propagate like viruses.

- In an interesting anthology of stories from 2007 that billed itself as "the post-cyberpunk anthology," writers John Kessel and James Patrick Kelly counted Stephenson as a "post-cyberpunk" writer, meaning writers influenced by cyberpunk or using some of its elements but not defined by its earlier incarnation. Kessel and Kelly identified what they see as the "signature obsessions" of cyberpunk:
 - Presenting a global perspective on the future



Among the "signature obsessions" of cyberpunk is authors' interest in developments in information and bio technology.

- Engaging with developments in infotech and biotech, especially those invasive technologies that will transform the human body and psyche

- Striking a gleefully subversive attitude that challenges traditional values and received wisdom

- Cultivating a crammed prose style that takes an often playful stance toward traditional science fiction tropes.

Much of this, of course, simply describes what a good deal of recent science fiction has become, long after the cyberpunk movement was a movement. But Kessel and Kelly also identify what is likely the most lasting contribution of the cyberpunk aesthetic and what makes it of particular importance in the history of science fiction. This is the insight that "We are no longer changing technology; rather it has begun to change us. Not just our homes and schools, our governments and workplaces, but our senses, our memories, and our very consciousness."

- Traditionally, science fiction has treated technology as a set of tools—robots, spaceships, marvelous new inventions and communication technologies—and although sometimes these conventions get out of hand, threatening or even replacing humanity, people themselves seem remarkably consistent over time.
 - » Even some of the most inventive future societies of such classic writers as Heinlein or Asimov feature character stereotypes familiar from earlier pulp fiction: the wise guy from Brooklyn, the absent-minded professor, the scientist's devoted wife or daughter, the competent but taciturn engineer, and so on.

 - » One could argue that cyberpunk dealt in its own stereotypes: the streetwise kid with brilliant hacker skills, the shadowy corporate representative, the tough-as-nails girl with a tragic past.

 - » But the chief difference is this: These characters are partly or extensively remade by their environments; they are as manipulated by their technologies as the technologies are by them. Indeed, cyberpunk may have been the first school of writers who recognized, as a basic ground rule, that people would adapt to and be fundamentally altered by the technologies we have invented.

Hypnotized by our cell phones and tied to our computers, we are, in many ways, already living in the world predicted by cyberpunk.



- Cyberpunk and its aftermath also laid the groundwork for later works of what came to be known as post-human science fiction, from Vernor Vinge's 2006 novel *Rainbow's End*, to Charles Stross's 2005 novel-in-stories *Accelerando*, to the radical hard science fiction of Australian writer Greg Egan. Today, we find many authors who are writing in the tradition of fiction in which humanity is transformed by its technology, fiction that blurs the line between the biological and the mechanical, between physical bodies and informational constructs, between reality and virtual reality—fiction pioneered by cyberpunk and its predecessors.

Readings

Gibson, *Neuromancer.*

Stephenson, *Snow Crash.*

Sterling, *Zeitgeist*.

Questions

1 The cyberpunk movements of the 1980s and its offshoots, such as steampunk, brought a streetwise sensibility and attitude into science fiction but later became social and cultural trends that extended well beyond fiction into music, film, and even clothing styles. Did cyberpunk represent a genuine new direction in terms of style and theme, or was it largely a matter of attitude and posturing?

2 The growth of the Internet and virtual reality may be one of the few areas in which science fiction—with a few notable exceptions—failed to foresee a major technological and social shift, with information coming to be viewed as an environment we live in rather than simply a tool we use. How has this shift affected our relationship to technology, and how is it reflected in fiction, film, and other forms of cultural expression?

LECTURE 20

The 1990s: The New Space Opera

From about the 1940s, science fiction was characterized by space operas—galaxy-spanning mega-adventures that featured impossible science, enormous superweapons and spaceships, and stock characters. For many later writers, such stories were a part of science fiction's history to be lived down, not celebrated. In the 1960s, with the New Wave, science fiction wanted to show that it could be literate and experimental; in the 1980s, with cyberpunk, it wanted to show that it could be hip and cool. But all along, individual writers sought ways to repurpose or reinvent many of the elements of the old space operas, retaining the sense of adventure but offering far more complex characters. In this lecture, we'll look at these new space operas.

The Centauri Device

- Ironically, the novel that some later writers would cite as having done the most to inspire the urge to revisit and update the old space opera roots, was actually written to put an end to space opera once and for all. This was M. John Harrison's *The Centauri Device*, which the author himself thought of as an "anti–space opera." It features a seedy 24th-century space captain named John Truck, who has no qualms about smuggling drugs or engaging in other illegal activities as he drifts around the galaxy looking for work.

- Unlike the action-oriented heroes of traditional space opera, Truck is largely a passive player in a bleak and corrupt future, where the 20th century is nearly forgotten. The two remaining superpowers on Earth, the Israeli World Government and the United Arab Socialist Republics,



The morally questionable protagonists and noir settings of M. John Harrison's *Light* are a far cry from the bright Technicolor futures and heroic space captains of classic space opera.

represent degraded forms of capitalism and socialism, and organized crime is a major force throughout the galaxy. There is also a frightening religious cult called the Openers and an alliance of art-loving spacefarers called the Interstellar Anarchists.

- Truck becomes the target of all these groups after the mysterious artifact of the title is discovered and it's learned that Truck, because of his unique ancestry, holds the key to unlocking its secret. That secret, it turns out, is that the device is a massively powerful superweapon not unlike those of classic space opera. But unlike those stories, this one ends in an apocalyptic and almost nihilistic conclusion that is anything but heroic.

- Harrison later returned to new space opera, producing one of the most complex and rewarding literary achievements of the movement. This was the loose trilogy of novels *Light* (2002), *Nova Swing* (2006), and *Empty Space* (2012), all featuring morally ambiguous characters and all connected to a mysterious region of space where reality is so distorted that it has baffled and even damaged many civilizations over the millennia. *Light*, in particular, is a superb example of the sort of literary complexity that can be packed into a space opera template.

The Culture Novels

- Another influential and respected developer of the new space opera was the Scottish writer Iain M. Banks, whose nine novels about a galaxy-spanning anarchist civilization called The Culture might be regarded as the single most substantial body of work in the field.

- The first few Culture novels were reworkings of early science fiction novels that Banks had written before launching a career in literary fiction. *Consider Phlebas* appeared in 1987 and was clearly an effort to reinvent some elements of the classic space opera—including world-sized spaceships, galaxy-spanning wars, space pirates, and bizarre planets—in a far more densely imagined future with morally ambiguous characters and complex political and social issues.

- The rather odd title is borrowed from a section of T. S. Eliot's poem *The Waste Land* entitled "Death by Water," which describes the death of a Phoenician sailor named Phlebas: "Consider Phlebas, who was once handsome and tall as you." And indeed, Banks's novel opens with a mercenary soldier name Horza, a genetically engineered "Changer" who can alter the shape of his body at will, facing a particularly gruesome death by water: drowning in sewage.

- The novel's plot grows more complicated and exuberant, but it's clear early on that Banks is out to avoid clichés, such as Roman-style galactic empires and corporate competition for resources; he has imagined a genuine post-scarcity culture. For humans, this is a kind of utopia, with many of the intellectual and management functions given over to "Minds," or powerful artificial intelligences that are basically one with the vast starships or space habitats they govern.

- Although *Consider Phlebas* offers a rich introduction to Banks's Culture, it's actually a bit overpacked and rambling compared to later Culture novels. *The State of the Art*, for example, satirizes aspects of contemporary Earth society in the context of a Culture mission, while *Use of Weapons*, often regarded as among the best of the novels, deals with the Culture's guilt and responsibility over its deliberate manipulation of

less advanced societies. This book also features one of the series' most innovative narrative forms, with alternating chapters telling one story in direct chronology and a parallel tale in reverse chronology.

- In general, Banks's rather dark and always provocative Culture series may be regarded as a kind of sophisticated, postmodern response to and critique of both the power fantasies and technological optimism of early space opera and earlier franchise universes, such as Isaac Asimov's Foundation series, Larry Niven's "known space" series of novels and stories, or even Frank Herbert's increasingly shaggy Dune novels.

Other Writers of New Space Operas

- By the mid-1990s, the new space opera had given rise to a wide variety of authors who found a new energy in this material. Dan Simmons's Hyperion Cantos—four epic novels published between 1989 and 1997—brought a distinct literary sensibility, complete with classical literature allusions to a far-future spacefaring tale. Stephen Baxter's Xeelee sequence of novels and stories, named after a mysterious ancient alien race who figures in most of them, quite literally covers the entire history of the universe from beginning to end.

- The Welsh-born Alastair Reynolds wrote an ambitious series of five novels between 2000 and 2007, describing what he calls his Revelation Space universe. This universe is replete with artificial worlds, neutron-star computers, sentient oceans, billion-year-old wars, alien mind parasites, doomsday machines, and much more, all covering tens of thousands of years of human history.

- Although some readers might regard British author Peter F. Hamilton as resembling more traditional space opera than new space opera, his successful series of long novels set in what he calls his Confederation Universe and his Commonwealth Universe, beginning with *The Reality Dysfunction* in 1996, are clearly celebrations of the scope and ambition of the form.

- Ken MacLeod deliberately introduced forms of radical political thinking, from anarchism to Trotskyism, into space opera environments in his series of novels collectively called The Fall Revolution. His 2004 novel of post-singularity humanity is pointedly titled *Newton's Wake: A Space Opera*, although actual allusions to the space opera form come rather late in the book.

- Perhaps one of the longest-running and most important series of novels that could reasonably be counted as new space opera is the Alliance-Union series from C. J. Cherryh. In this work, future space exploration is financed largely by private corporations, but many of the inhabited space stations are so remote that they develop their own distinct cultures. This gives Cherryh the opportunity to develop myriad themes—everything from military science fiction to gender issues to sociological speculation and swashbuckling adventure.

- Lois McMaster Bujold is often classified as a writer of military science fiction, but she also incorporates significant elements of new space opera. Bujold's overall setting is a classic space opera environment. Hundreds of planets in the galaxy have been settled by humanity, who travel among them through systems of wormholes.





The Fate of New Space Opera

- In 2006, editors David Hartwell and Kathryn Cramer compiled an anthology titled *The Space Opera Renaissance* that deliberately set out to challenge what they viewed as the "revisionist history" of the space opera. Tracing the history of the term from its origins in fandom to refer to worn-out clichés, through the contempt shown for it by writers of the New Wave, to its emergence as a kind of good-humored nostalgia in the early 1970s, they make a case that the old space opera never went away but splintered into a variety of other subgenres, such as military science fiction or swashbuckling planetary romances.

- They also raise the important point that while this splintering was going on in literary science fiction, space opera developed an entirely new and younger generation of readers following the phenomenal success of the movie *Star Wars* in 1977, with its ongoing succession of sequels, prequels, and spinoff novels and games.

- Whether such films and contemporary television shows are examples of new space opera or classic space opera dressed up with modern movie technology, they certainly developed a new audience for rousing space

adventures, and publishers were aware of this. Obtaining the rights to publish novels based on the Star Wars universe, veteran editor Judy-Lynn del Rey helped develop a series of novels that often appear on bestseller lists. Meanwhile, a newer publisher, Baen Books, carved out a profitable market specializing in series of space opera or military science fiction novels.

- The new space opera was never a particularly self-aware movement in the way that the New Wave or cyberpunk had been, and as Paul McAuley said, it could as easily be viewed as a coincidence of many authors wanting to try similar things at about the same time. In film and television, it might be argued that filmmaking technology, with its more efficient special effects and computer-generated imagery, simply reached the point where it was feasible to put such large-scale, effects-driven movies on the screen.
 - » Either way, by the end of the 1990s it seemed that, as an identifiable trend, the new space opera no longer seemed quite so new. Instead, it became part of the toolkit that science fiction writers could draw on for plots, ideas, and settings.

 - » By the time editors Gardner Dozois and Jonathan Strahan compiled two anthologies of original stories, *The New Space Opera* and *The New Space Opera 2*, in 2007 and 2009, they were able to get stories from a wide variety of authors, many of whom were not generally associated with the form in the 1990s.

 - » This suggests that space opera, new or old, has become more a mode than a period. Much as cyberpunk-style narratives never quite disappeared after the movement's heyday and as literary experimentation and psychological themes remained common long after the New Wave, the new space opera suggests that science fiction is no longer really just one thing at all but a vast and still-changing set of dialogues with both modern science fiction and its own past.

Readings

Banks, *Consider Phlebas.*

Cherryh, *Downbelow Station.*

Harrison, *Light.*

Reynolds, *Revelation Space*.

Questions

1 By revisiting classical forms of science fiction narratives, such as space operas and planetary adventure stories, science fiction writers sought to combine the appeal of these popular story types with better science and more fully developed literary values. Is this trend unique to science fiction, or do other forms of popular narrative also often "return to their roots" by repurposing older modes in a more complex literary manner?

2 In contrast to this revisiting of classic forms, science fiction writers also increasingly sought ways of experimenting with newer themes, such as virtual reality, and with more self-consciously literary techniques borrowed from modernism and other modes not customarily associated with popular fiction. As science fiction embraces traditional literary values emphasizing more complex style and characterization over traditional adventure plots, does it risk losing or alienating its core audience?

LECTURE 21

The Artifact as a Science Fiction Icon

In several of these lectures, we've focused on instantly recognizable icons of science fiction, such as the spaceship or the robot. But it's important to note that such icons are more than just furniture. They are carriers of meaning, and they gain much of their power from the ways in which they embody some of the defining tensions of the genre—between the known and the unknown, the familiar and the strange, ourselves and the Other. The icon we'll discuss in this lecture—the artifact—is one we might not at first think of in terms of science fiction, but it makes an intriguing addition to the genre.

Defining *Artifact*

- For our purposes, *artifact* means not just any manufactured object but a manufactured object embedding evidence of some specific and often remote time and place and invested with some sort of value or mystery to those who discover it.

- The artifact embodies three distinct historical systems: the system surrounding its manufacture—who made it and why; the system of its own history—how it got from its point of origin to its point of discovery; and the system of the culture that discovers it—what it means to us.

- Even the simplest artifact—a potsherd or an arrowhead—carries with it a wealth of associations and implications; thus, we can imagine how much fun science fiction writers have had in creating imaginary ones.

Arthur C. Clarke's Artifacts



Arthur C. Clarke

- One of the most famous artifacts in science fiction began life as a short story by Arthur C. Clarke. "The Sentinel" (1951) describes an explorer on the Moon who comes across a strange, pyramid-shaped object, set in a plateau that has clearly been leveled and is protected by an invisible force field.
 - » It's obvious that this pyramid is the product of an advanced technology, but various tests determine that it has been there for millions of years—even before life emerged from the seas on Earth. All that time, it has been sending a beacon or signal, presumably to the ancient aliens who left it there.

 - » Eventually, the force field is cracked, and as soon as that happens, the signals cease. The narrator speculates that these aliens long ago visited the solar system, determined that the Earth could eventually give rise to intelligent life, and left the object behind as a sentinel, choosing to leave it on the Moon to make sure it would not be discovered until we were advanced enough to have developed space travel.

 - » When the signals cease, the aliens will know that we're advanced enough to be worth a visit. The narrator ends the story by saying, "I do not think we will have to wait for long."

- Clarke returned to the image of the artifact in several later stories and novels, most notably his 1974 novel *Rendezvous with Rama*. This book describes a huge, mysterious cylindrical vessel, some 30 miles long by 12 across, that drifts into our solar system. Upon exploring it, astronauts find that it contains a self-sustaining environment, but

with no trace of its builders. In many ways, the novel is a romance of archaeological exploration and discovery, with a few science puzzles thrown in, as well.

- The exploration-tale structure gives Clarke the opportunity to set up and resolve a number of ingenious problems, each of which carries with it a Jules Verne–like lesson in scientific principles.

- This kind of scientific detail is engrossing in its own way, but the repeated pattern of puzzles and solutions serves another function, as well: It sets up an expectation in the reader that the greatest of the puzzles—Rama itself—also will yield a solution. And it does, in a way; when Rama changes trajectory near the Sun, it becomes apparent that the artifact has used the solar system as nothing more than a refueling stop and that the Ramans themselves, whoever they are and whatever their purpose, are unconcerned with and probably even unaware of humanity.

- Thus, the scientific ingenuity that has been the novel's hallmark receives an ironic comeuppance in the novel's conclusion. Rama departs, having grown from a tantalizing mystery into an adventure-filled landscape and, finally, a monument to the universe's indifference. Like the universe, Rama can be explored and measured but not explained or understood.

Big Dumb Objects

- One aspect of Rama that is noteworthy, of course, is that it's huge—far larger than the pyramid of "The Sentinel." The idea of ever-larger alien artifacts has become such a convention in science fiction that it earned its own term: the *Big Dumb Object*, not because the objects are unintelligent in their construction, but because they offer us little more than silence in explaining their origins.

- Even before *Rendezvous with Rama*, Larry Niven's 1970 novel *Ringworld* described the discovery of a massive ring-shaped habitat completely encircling a star at a distance of some 90 million miles,

though again, no one knows who left it there. The ring itself is 1 million miles wide, giving the artifact a total usable surface some 3 million times that of the Earth—and, of course, a massive arena for all sorts of adventure stories.

- Not to be outdone by Larry Niven's giant ring, the English author Bob Shaw published *Orbitsville* (1975), describing a solid manufactured shell encircling a star and providing on its inner surface a usable land mass some 5 billion times that of Earth.

- Even this was dwarfed in comparison to such later artifacts as Stephen Baxter's Ring, in his novel of that title. The product of an ancient and almost unimaginably advanced race called the Xeelee, the Ring is actually constructed of cosmic strings formed into an enormous loop, many light-years in diameter. The loop forms something called the Great Attractor—a gravitational anomaly so huge that it affects the movements of entire galaxies and distorts the expansion of the universe.

Complex Artifacts

- In some works, the artifact functions in more complex ways—sometimes as an emblem of the sheer randomness or indifference of the universe, sometimes as a mirror that reflects our own obsessions and beliefs, and sometimes as an image of what science has yet to accomplish.

- In terms of the apparent randomness of the universe or the arbitrariness of life and death, few science fiction novels make this clearer than Algis Budrys's *Rogue Moon* (1960). The artifact in this case is a mysterious artificial labyrinth on the Moon, apparently left there by aliens.
 - After several attempts to explore the labyrinth have resulted in the deaths of volunteers, an elaborate matter-transmitting machine is concocted that enables the explorer to remain safely on Earth while telepathically connected to a copy of himself on the Moon. All who volunteer, however, are driven insane by the trauma of death when their duplicates in the labyrinth are killed.

- Hawks, the scientist in charge of the experiment, sets out to find a volunteer so enamored of death that he might withstand the psychological trauma. Ultimately, he settles on Barker, who first appears as a traditional macho pulp hero. Barker isn't undone by the trauma of death, but he can't deal with its meaninglessness. "Hawks," he says when he emerges from the maze for the first time, "it didn't care! I was *nothing* to it!"

- Barker finally traverses the entire labyrinth successfully, but he emerges feeling an undefined sense of loss. Hawks, on the other hand, realizes that the meaning of the artifact lies in what it does to us, not in who built it or why.

- The artifact itself is never "explained" in terms we might expect from a more conventional science fiction novel, and in fact, no explanation could do the image justice. The artifact behaves toward us as capriciously as the universe itself does, and by letting the image stand as an emblem for all that we seek to understand, Budrys transforms the icon into something considerably more powerful.

- The artifact as a mirror that reflects our own obsessions and beliefs appears in *Roadside Picnic* by the Russian brothers Boris and Arkady Strugatsky. The artifacts here are various objects left behind on Earth by alien visitors.
 - More than a decade earlier, aliens had apparently visited six places on Earth, but no one saw them come or go, and the areas where they landed have become closely guarded zones, inside of which all sorts of strange objects have been found and weird things happen. Venturing into the zone is hazardous in much the same way as the labyrinth in *Rogue Moon*; areas of concentrated gravity or fatal hazards called "bug traps" or "grinders" can kill the unwary without warning.

 - But some of the artifacts found in the zones have given rise to new technologies, such as an infinite battery, or provide medical benefits, such as bracelets that stimulate health; others are

complete mysteries, such as the "empties"—pairs of unconnected metal disks that can't be moved closer together or further apart by any force.

- No one has any idea of the original purposes of these artifacts, whether the aliens deliberately left them behind, or whether, as one scientist suggests, they are simply analogous to the sorts of things we might ourselves leave behind at a roadside picnic.

- As should be apparent by now, the artifact—usually of alien origin—has become so ubiquitous in science fiction and so useful to science fiction writers that it rivals such classic icons as robots and spaceships. There are, for example, any number of novels and films in which the artifact serves as a portal to other parts of the universe. Among the most famous treatments of this theme is Frederik Pohl's *Gateway* (1977). Other such portals include Tricia Sullivan's *Lethe* (1995) and Robert Charles Wilson's *Spin* (2005) and *Axis* (2007).

- Finally, one writer who has consistently returned to the image of the artifact in a number of ways is Gregory Benford. His Galactic Center series details a long and ancient struggle between organic and machine civilizations throughout the universe.
 - As in Budrys's *Rogue Moon* and Strugatsky's *Roadside Picnic*, Benford's artifacts are important chiefly as catalysts for the development of ideas and characters rather than as puzzles for the reader to solve.

 - Benford's work is also significant for its suggestive connection of the artifact to the wider world of literature. It is even possible that the enduring appeal of the artifact might be, in some way, its service as the literature's image of itself—at once an emblem of the irreducible mystery of the universe, a catalyst for exploration and discovery, and a mirror that shows us our own hopes, fears, and dreams.

Readings

Baxter, *Ring*.

Benford, *In the Ocean of Night*.

Budrys, *Rogue Moon*.

Clarke, *Rendezvous with Rama*.

Questions

1 The mysterious artifact has been a staple of popular stories from mysteries to international thrillers but seems to have a particular appeal in science fiction. How do specific images of such artifacts, from the monolith in the film *2001: A Space Odyssey* to the massive, galaxy-spanning Ring in Stephen Baxter's novel of that title, embody and evoke the sense of wonder that has often been described as a central emotional response to science fiction?

2 Several science fiction works involving artifacts, such as Algis Budrys's *Rogue Moon* or the Strugatsky brothers' *Roadside Picnic*, imply an existential condition of humanity surviving in a universe that doesn't care or is completely indifferent to our presence. How does this realization compare to other philosophical speculations on the human condition, and how does it make such speculations concrete?

LECTURE 22

Science Fiction's Urban Landscapes

Many critics and readers have observed that fantasy fiction often focuses on pastoral settings and tends to look to or even idealize the past, whereas science fiction is largely an urban literature. The British critic Tom Shippey even set science fiction in opposition to the entire tradition of pastoral literature, writing that it is "overwhelmingly urban, disruptive, future-oriented, eager for novelty." Certainly, plenty of science fiction is set in remote areas, post-apocalyptic wastelands, or outer space, but one of the recurrent iconic images of the genre is that of the gleaming future megalopolis, full of enormous buildings, flying cars, and soaring highways and teeming with pedestrians dwarfed by the sheer scale of the environment.

The Changing City in Science Fiction

- Future cities in earlier science fiction were described in gleaming terms, with "gigantic buildings connected by wide, suspended roadways on which traffic will speed at unheard of rates." In later novels, such as William Gibson's *Neuromancer*, we get far grimmer descriptions of the city: "Port and city were divide by a narrow borderland of older streets. … Beyond the neon shudder of Ninsei, the sky was that mean shade of gray. The air had gotten worse; it seemed to have teeth tonight, and half the crowd wore filtration masks."

- When and why did the innocent visions of clean and prosperous dream cities give way to the dystopian visions of cyberpunk? One answer, provided by some social critics and urban historians, such as Lewis

Mumford, is that those pulp-era fantasies were basically fairly dystopian to begin with.

- » It's true that the visions of Hugo Gernsback, editor of *Amazing Stories*, seem fairly naïve. But before Gernsback started his magazine, the German writer Thea von Harbou had written a novel that would lead to one of the most harrowing visions of urban life in science fiction history: *Metropolis*.

- » Here's the vision of urban life from that novel: "Men, men, men—all in the same uniform, from throat to ankle in dark blue linen, bare feet in the same hard shoes, hair tightly pressed down by the same black caps. ... The open gates of the new tower of Babel, the machine centre of Metropolis, threw the masses up as it gulped them down."

- In John Brunner's classic 1968 novel of overpopulation, *Stand on Zanzibar*, New York is a domed nightmare of overcrowding and murderous "muckers" driven berserk by the claustrophobic environment, who make the streets so hazardous that it's dangerous to be caught outdoors.

- A similar vision of New York was in Harry Harrison's 1966 novel *Make Room! Make Room!*, which also focused on overpopulation but with a strong theme of environmental sustainability and pollution.

- Whether utopian or dystopian, the ever-expanding city seemed to be the inevitable habitation of the future, both in and out of science fiction. This shouldn't be surprising, because in America, at least, just about the entire history of the country could be viewed in terms of migration to the cities.
 - » By 1940, in his story "The Roads Must Roll," Robert A. Heinlein described a future in which "The great cities of Chicago and St. Louis stretched out urban pseudopods toward each other, until they met near Bloomington, Illinois"—an early version of the "Sprawl" that later featured in Gibson's *Neuromancer* and its sequels: a huge, unbroken urban area that stretched from Boston to Atlanta.

» Also in the 1940s, in his Foundation stories, Isaac Asimov described the planet Trantor, the center of his galaxy-wide government, as having a landmass greater than that of Earth but covered entirely in gigantic domes and habitats that reached deep underground, supporting a population of some 45 billion, fed by nearby agricultural planets.

- It's interesting to realize, when we consider the futuristic cities of the 1920s to the 1980s, that we're already living in those cities of tomorrow. We conquered the frontier and the wilderness—which provided the settings of western stories in the 19th and early 20th centuries—and moved to the metropolis—the setting of so much science fiction. But urban survival became a new frontier on its own, with fears of crime and lawlessness, scarce resources, environmental hazards, a growing sense of isolation, and various corporate and criminal turf wars.

- It would be a mistake, however, to think of this emerging view of the city as exclusively an American development or exclusively belonging to the 20th century. In fact, similar concerns lay behind some of the early classics of science fiction and helped determine its worldview long before Hugo Gernsback or even William Gibson.

The dirty, dangerous urban frontier described in science fiction dystopias can also be found in the hardboiled detective fiction that developed in parallel with science fiction in the 1930s and 1940s.



The City in Victorian Literature

- Such writers as Charles Dickens, George Gissing, Charles Kingsley, and Benjamin Disraeli were among the Victorian writers to describe London in terms that, from a science fiction perspective, now look fairly dystopian. The poet Percy Shelley had written, "Hell is a city much like London, a Populous and smoky city," and the influential critic and writer John Ruskin referred to it in the 1860s as "That great foul city of London,—rattling, growling, smoking, stinking—ghastly heap of fermenting brickwork, pouring out poison at every pore."

- Major construction projects were undertaken in 19th-century London, including the installation of sewers and the beginnings of the underground railway system. H. G. Wells, of course, was well aware of the contrast between laborers working underground or in factories or mines and the elite classes enjoying sunlit parks and elegant houses. As the critic Raymond Williams wrote, Wells's *The Time Machine* simply gave an "evolutionary dimension" to those urban class divisions, imagining what they might lead to over hundreds of thousands of years.

- In 1910, Wells published *The Sleeper Awakes*, which describes a contemporary who falls asleep and awakens in the year 2100, a time when an oppressive plutocracy in a dystopian London faces a revolt from workers. In both that novel and his earlier "A Story of the Days to Come" (1897), Wells anticipated many of the aspects of urban life we see in later science fiction.
 - The early stage of urbanization described in "A Story of the Days to Come" looked similar to Victorian London: The cities were "horribly inconvenient, darkened by smoky fogs, insanitary and noisy." But by 2013, "all the city ways, all public squares and places, were covered in with a recently invented glass-like substance. The roofing of London became practically continuous," as skyscrapers rose higher and higher and life in individual houses "was steadily supplanted by life in interminable hotels."

- But the class divisions remain intact or even worse:

 > The prosperous people lives in a vast series of sumptuous hotels in the upper storeys and halls of the city fabric; the industrial population dwelt beneath in the tremendous ground-floor and basement, so to speak, of the place.

- In a remarkable early story intended as a "counterblast" to Wells's utopian writings, the novelist E. M. Forster produced one of the most claustrophobic visions yet of a completely mechanized and enclosed future city. "The Machine Stops" (1909) depicts a society living in a vast underground habitat, where the people's every need is taken care of by the machine of the title.
 - No one remembers who built the machine or how to repair it. They have developed a terror of the outside world, and even of each other, as individuals live alone in small cubicles, communicating through something like videoconferencing.

 - The two central characters are Vashti, a woman content with her sterile life, and her more rebellious son, Kuno, who claims that he has actually visited the surface and seen people living there. Kuno is critical of society's almost total dependence on the mechanized city.

 - Kuno believes that small glitches in everyday life indicate that the machine is breaking down, but of course, no one believes him or questions the machine's omnipotence. When the machine finally collapses, the result is a catastrophic end to Vashti and Kuno's civilization.

Vertical and Enclosed Cities

- The idea of the vertical city, the vast enclosed space isolated from nature, has been seriously proposed, most notably by Italian architect Paolo Soleri. He argued for enormous, self-contained, multiuse structures as a

way, ironically, of minimizing human impact on the environment. The idea was that concentrating people into dense, technologically sophisticated facilities would free up needed land for the agriculture that would be required to feed the rapidly growing population.

- Needless to say, science fiction writers ran with this idea. Robert Silverberg provided one of the most vivid pictures of life in such a society in *The World Inside* (1971), a collection of seven narratives loosely connected by overlapping characters. Silverberg's engaging book describes daily life in the 24th century of "Urbmon 116," one of 50 megastructures, each 1,000 stories or 3 kilometers high, that make up what he calls the "Chipitts" complex, stretching from what once was Chicago to Pittsburgh.

- Arthur C. Clarke's *The City and the Stars* (1953) is set a billion years in the future in a completely enclosed city named Diaspar, the last city on a deserted Earth; no one has gone outside for many generations, and life is completely maintained and regulated by the Central Computer. The computer even stores the personalities of past Diasporan citizens, decanting them, with edited memories, into the comparatively smaller number of individual bodies that occupy the city at any one time.
 - » Alvin, the protagonist, is the first child to be born in Diaspar in millions of years. For this reason, he lacks the inherited fear of the outside, and his curiosity is what powers the novel's plot. He learns that Diaspar is not quite alone on Earth—there's another more pastoral society called Lys—that humanity had been driven back from the stars in an ancient battle with mysterious invaders, and that an ancient, long-buried spaceship is still functional.

 - » The narrative circles outward, growing ever more cosmic in scope as we meet vast disembodied intelligences and a mostly deserted universe. Alvin eventually learns that, in fact, there were no invaders and a portion of humanity was left behind when the galactic civilization achieved a kind of universal consciousness and moved on to another universe entirely. The inhabitants of Diaspar were among those left behind.

» In the end, this vision of the city is not the best the future has to offer but an image of retreat, fear, and the end of ambition. Even in Clarke's title, the stars represent the outward urge that is so characteristic of science fiction's classic philosophy, while the city is little more than a dead end, maintaining a kind of eternal stasis, with no room for growth, imagination, or exploration. It's a provocative thought: Are our cities the beginning of humanity's future, or could they be its end?

Readings

Clarke, *The City and the Stars.*

Forster, "The Machine Stops."

Silverberg, *The World Inside.*

Questions

1 Is the common argument that science fiction is predominantly an urban literature, as contrasted with fantasy as pastoral narrative, defensible in terms of the actual works produced in these genres, or is this an effort to impose an archaic taxonomy on contemporary narratives?

2 Once an image of order and civilization as contrasted with the wilderness, the city (both fictional and real) has grown so sprawling and complex that it becomes a kind of wilderness itself, characterized by danger, isolation, and alienation. Is this shifting image of the city apparent in other genres besides science fiction?

LECTURE 23

Science Fiction in the 21st Century

Over about the last 20 years, science fiction has seen a blossoming of diversity. For most of the 20th century, the genre was largely under the control of editors and publishers who were mostly white, mostly male, and mostly American. But now, with the proliferation of online venues for fiction and commentary, an increase in the number of small presses, and the entry into the field of a growing number of younger authors who are finding new uses for science fiction's visions, it can reasonably be claimed that no one owns science fiction anymore—or, perhaps, that everyone has a shot at owning at least a piece of it.

Diverse Voices in Science Fiction

- In the 1960s and 1970s, a number of African American writers began to draw attention in science fiction. These writers included Samuel R. Delany, who burst onto the scene in the mid-1960s with a series of remarkable novels that he began writing while still a teenager, including such titles as *The Jewels of Aptor*, *The Einstein Intersection*, and *Nova*.

- A decade or so later, he was joined by Octavia Butler, whose novel *Patternmaster*, the first of a series, inaugurated a career that was tragically cut short by her premature death at the age of 58 in 2006. Together with a handful of somewhat younger writers, such as Steven Barnes; his wife, Tanarive Due; and Walter Mosley, Butler and Delany were sometimes heralded as having brought African American voices, concerns, and sensibilities into science fiction and fantasy.

- Although there's some truth to that, an anthology from 2000, Sheree Thomas's *Dark Matter*, showed that such voices had been present all along but were mostly invisible to the science fiction community. In that anthology and a sequel, *Dark Matter: Reading the Bones*, Thomas unearthed, among other things, a 1920 science fiction story by W. E. B. Du Bois and a 1931 novel called *Black No More* by George Schuyler.

- Not long after Thomas's anthologies drew attention, a movement or aesthetic called *Afro-futurism* became the topic of a special issue of the journal *Science Fiction Studies* and of a collection of critical essays edited by Marleen Barr, *Afro-Future Females: Black Writers Chart Science Fiction's Newest New-Wave Trajectory*. Afro-futurism drew not only on science fiction and fantasy but also on forms of expression as diverse as the music of Gil Scott-Heron and Sun Ra and the art of such painters as Jean-Michel Basquiat.

- So much of this "new" diversity involved not just new writers but a bit of literary archeology, as well. In 2004, for example, a scholar named Elizabeth Ginway wrote a history of Brazilian science fiction, going back to the 19th century. Studies of Japanese, French, and Chinese science fiction have also appeared.

- One reason that international science fiction never really reached American or British audiences was that so little of it was ever translated—a problem that remains crucial today, although the situation is improving. We'll do our part in acknowledging the diversity of science fiction by looking at three talented writers: Nalo Hopkinson, Nnedi Okorafor, and Lavie Tidhar.

Nalo Hopkinson

- Nalo Hopkinson's first novel, *Brown Girl in the Ring*, appeared in 1998, winning a first-novel contest from the Warner publishing group. The story draws freely on the folklore of her Caribbean background but also on the resources of near-future science fiction, dystopian literature, and even horror.

- *Brown Girl in the Ring* takes place in the inner-city Caribbean ghetto of a near-future Toronto, a gang-ruled, post-apocalyptic urban wasteland familiar to science fiction readers. But into this setting, Hopkinson introduces the folk tradition of demons called soucouyants, a particularly fearsome spirit called a duppy, and various forms of witchcraft and herbal healing. There is also a terrifying drug called bufo, and in the novel's most intense and harrowing scene, the vicious gangster Rudy flays a woman alive while the drug renders her unable even to scream.

- Rudy is a terrific villain, and it is his corrupt involvement with the premier of Ontario that sets the action in motion. The premier is in need of a heart transplant, but she refuses the pigs' hearts that have long since replaced human organ donation. Because there are no ready sources for human hearts, Rudy's gang is enlisted to track down a compatible (if unwilling) donor.

- Ti-Jeanne, the young woman who is the novel's protagonist, is drawn into the situation when her boyfriend, Tony—who has been trying to get out of Rudy's gang—is assigned to work with a thug named Crack Monkey to find the heart. In addition to combining such science fiction ideas as cross-species transplants and a dark urban future with elements of the supernatural, the novel dramatically introduced into science fiction the speech patterns and distinct patois of its Caribbean characters.

This use of unusual dialect continued in Hopkinson's next novel, *Midnight Robber*, set on another planet and involving a nanotechnology-based information system. The planet is called Toussaint, named for the Haitian revolutionary leader Toussaint Louverture, and had been settled two centuries earlier by Caribbean cultures.

- In this novel, Hopkinson does something very interesting with the language of science fiction. The characters and the narrator retain some of the speech patterns and folkloric references of their ancestors ("It ain't have no doux-doux here"), while their speech is also sprinkled with references to "dimension veils" and "nanomites."

- The resulting dissonance is only one of Hopkinson's techniques for making us question the traditional hegemony of American culture in science fiction worlds, but it's the most immediately striking.

- Hopkinson's next three novels featured fantasy more than science fiction, but her 2013 *Sister Mine* returns to the near-future Toronto setting of *Brown Girl in the Ring*, which gives it an edge of science fiction even as it tells a story of demigods. As this novel indicates, Hopkinson has been a pioneer not only in introducing a different set of cultural norms into science fiction but also in combining elements of science fiction and fantasy in the same story, another important and growing trend of the 21st century.

Nnedi Okorafor

- Nnedi Okorafor earned a doctorate in writing focusing on science fiction and fantasy and began her career with two young adult novels, *Zahrah the Windseeker* in 2005 and *The Shadow Speaker* in 2007.
 - *Zahrah the Windseeker* is set on a lushly overgrown planet called Ginen, a name that suggests the mythical homeland of the African diaspora. Much of the planet is covered by a dangerous and forbidden wilderness called the Great Greeny Jungle. The plot involves Zahrah and her boyfriend deciding to explore the jungle, where he gets bitten by a poisonous snake, the only remedy for which is a serum stolen from a fearsome monster, which Zahrah must then try to obtain.



Nnedi Okorafor

- *The Shadow Speaker* is set in a Nigerian village in 2070 and is told from the perspective of a fourteen-year-old girl growing up in late-21st-century Niger, which despite its advanced technology, has been transformed by a cataclysmic Great Change into a world where magic again works. Much of the story involves tracking down a legendary warrior-woman to join the girl in trying to save the Earth from being annihilated.

- Okorafor's first adult novel, *Who Fears Death*, also combines elements of fantasy and science fiction but addresses some contemporary and disturbing issues, such as female genital mutilation and weaponized rape. *Who Fears Death* is set in a far-future version of Sudan called the Seven Rivers Kingdom, but it's a strangely transformed version: Sorcery and shapeshifting coexist with computers, satellite communications, and "capture stations" to draw needed water from the air.

- A prequel to *Who Fears Death*, *The Book of Phoenix*, is very different in tone—a near-future thriller involving radical genetic engineering, a vast and vile corporate-government conspiracy, and a cast of superpowered characters that borrow some features from superhero comics.

- Okorafor's next novel, *Lagoon*, returns to the familiar science fiction theme of aliens landing on Earth but seen from the perspective of a variety of African characters living in Lagos, Nigeria.

Lavie Tidhar

- Lavie Tidhar grew up on a kibbutz in Israel. Later living in South Africa, the United Kingdom, Laos, and the island nation of Vanuatu in the south Pacific, he developed an interest in worldwide science fiction and promoted it in his blog and a series of anthologies starting in 2009.

- Tidhar first came to wide attention with a series of three steampunk novels called The Bookman Histories in 2010, but his fascination with mixing popular genres, from a kind of Israeli pulp fiction little known

outside that country, to hardboiled American detective fiction, to alternate-world science fiction and fantasy, became most apparent with *Osama* and the three novels that followed it.

- The plot of *Osama* begins in Vientiane, Laos, where a down-at-the-heels private eye named Joe is approached by an equally clichéd mystery woman, who offers him an apparently unlimited expense account to track down a pulp author with the unlikely name of Mike Longshott.

- We soon learn that this world is different from our own in some key ways; the World Trade Center bombing in 2001, for example, never happened. But Longshott's popular series of adventure novels, collectively titled *Osama bin Laden: Vigilante*, depicts a terrorist-ridden world that we immediately recognize as our own, and the interspersed passages from these novels read like straightforward journalistic accounts of actual terrorist events.

- As Joe sets out on his international investigation, he learns that powerful forces want him to abandon his hunt. He repeatedly comes across shadowy references to "refugees," which give us a hint about where the story is heading in metatextual terms; our own world is the world inside these novels, but of course, we're reading about Joe in a novel published in our own world, and the two worlds seem to be beginning to leak into each other.

- Tidhar's next three novels are increasingly risky in terms of subject matter, treating such topics as Auschwitz in the context of lurid pulp fiction. In *The Violent Century*, he takes this risk a step further by introducing comic book–style superheroes into the most violent events of the 20th century. And in *A Man Lies Dreaming*, Tidhar raises serious questions about the forces that shaped the 20th century—not to mention the question of just how far one can go in appropriating horrific real-life tragedies in the service of adventure fiction without risking accusations of trivialization or sensationalism.

Readings

Hopkinson, *Brown Girl in the Ring*.

Okorafor, *The Book of Phoenix*.

Tidhar, *Osama*.

Questions

1 Although most of the accepted history of science fiction derives from a heavily Anglo-American tradition, the increasing diversity of writers entering the genre and the development of science fiction traditions in countries as various as China, Japan, Nigeria, Brazil, and India have called into question some of the cultural assumptions of those early classic tales. How does an awareness that the global economy and global cultures may be shifting away from simple American or British dominance change the ways in which we think about the future?

2 In addition to the growth of international science fiction, contemporary readers can be more aware of diversity in terms of gender, sexual orientation, ethnic background, or even political affiliation. In often dealing with imaginary societies, do such genres as science fiction and fantasy carry a heavier obligation to address questions of cultural appropriation?

LECTURE 24

The Future of Science Fiction

One of the most prestigious honors an American author can receive is the Medal for Distinguished Contributions to American Letters, presented by the same organization that gives out the annual National Book Awards. The medal has gone to Ray Bradbury and Ursula K. Le Guin, but none of the National Book Awards for fiction has ever gone to a science fiction book. The literary establishment seems occasionally willing to recognize a science fiction or fantasy writer but not a novel in those genres. Still, we can argue reasonably that the 2014 award to Le Guin, along with awards to Doris Lessing, Brian Aldiss, and others, is at least some cause for hope among younger science fiction writers.

Award-Winning New Writers

- A number of younger writers have either grown up reading science fiction or simply don't see any stigma in using science fiction devices in their writing. Jonathan Lethem, for example, received a National Book Critics Circle Award in 1999 and a Nebula Award nomination for his first novel, *Gun, with Occasional Music* in 1994. This was a surrealistic mashup of the hardboiled private-eye novel and science fiction set in a 21st-century San Francisco.
 - Lethem also edited three volumes of the novels of Philip K. Dick for the prestigious Library of America—which had previously included no science fiction writers—and coedited a selection of the stories of Robert Sheckley, who was one of science fiction's most prominent satirists in the 1950s and 1960s. These influences, especially Dick, show up in some of Lethem's later novels, such as the 2009 *Chronic City*.

- Lethem, like some other writers of his generation, seems to have little difficulty in making a kind of narrative salad out of elements from science fiction, dream fantasies, crime fiction, and the internal novel of character.

- Michael Chabon received a Pulitzer Prize for his 2000 novel *The Amazing Adventures of Kavalier and Klay*, largely drawn from his childhood love of comics, as well as both Hugo and Nebula Awards for *The Yiddish Policeman's Union* in 2007. The latter is a murder mystery set in an alternate history in which much of the European Jewish refugee population during World War II was relocated not to Israel, but to Sitka, Alaska.
 - Chabon also became a vocal defender of science fiction and other genre literature, partly through special issues of the literary journal *McSweeney's*, in which he pointedly included stories by Harlan Ellison, Michael Moorcock, and Carol Emshwiller, as well as more traditional literary writers, such as Rick Moody or Aimee Bender.

 - His own contribution was a rollicking story called "The Martian Agent, A Planetary Romance," which was the first chapter of a never-completed serial about an Edgar Rice Burroughs–like Mars that had been conquered by Victorian England.

- Other successful literary novelists have emerged in the 21st century whose works are informed by science fiction tropes, even though they are almost never marketed or reviewed as science fiction. The Canadian writer Emily St. John Mandel earned a National Book Award nomination for her 2014 novel *Station Eleven*, which takes place several years after a virulent plague has wiped out most of humanity. It deals mostly with a traveling troupe of actors and musicians who try to keep art and culture alive, performing Shakespeare while wandering through an almost deserted Midwestern landscape that's reminiscent of the 19th-century frontier.
 - Mandel has argued that the book isn't science fiction, but it seems that she may have an incomplete understanding of what science fiction is. She argues, for example, that her novel introduces no new or futuristic technology, as though that's a necessary characteristic of science fiction books. In fact, many post-apocalyptic science fiction novels are set in futures in which technology is diminished or absent.

- In addition, the motto of her performing troupe is "Survival is insufficient," a line she lifted from an episode of *Star Trek: Voyager*. In fact, this is almost the entire point of her haunting novel, which admittedly, deals less with the causes and immediate aftermath of the plague than with its effects on how humans view themselves and what is important to preserve.

- Science fiction or what we might regard as the techniques of science fiction have also begun to inform novels that clearly aren't a part of the genre by any reasonable definition. The title character in Junot Diaz's Pulitzer Prize–winning *The Brief Wondrous Life of Oscar Wao*—an overweight, socially inept nerd from the Dominican Republic, now living with his family in New Jersey—is a science fiction fan from his early teens.
 - When his nerdiness exiles him from the sensual joys of adolescence, it's "sort of like getting locked in the closet on Venus when the sun appears for the first time in a hundred years"—an allusion to a Bradbury story that reads like an in-joke for science fiction readers.

 - His lifelong ambition, apart from losing his virginity, is to become the Dominican Tolkien by means of a four-volume Doc Smith–style space opera called *Starscourge*, a probably unpublishable epic that he works on obsessively throughout his adolescent and adult life.

 - Diaz himself is a knowledgeable science fiction reader and even published a fragment of a science fiction story in *The New Yorker* in 2012—in that magazine's first and only "science fiction" issue.

Science Fiction and Literary Respectability

- When *The New Yorker* publishes a science fiction issue or when the prestigious Library of America publishes a two-volume selection of "nine classic science fiction novels of the 1950s," does that mean that the long battle for literary respectability has been won? The answer is probably mixed.

- Science fiction is no longer uniformly regarded by the literary world as an embarrassment or a subliterary genre. But at the same time, when such authors as Mandel express the view that their science fiction isn't really science fiction, they are echoing at least the remnants of that attitude, probably not from literary snobbery so much as from simply not having had a broad exposure to what science fiction has become in the last 50 years or so.

- There are still a handful of science fiction writers who regularly show up on bestseller lists, such as Neal Stephenson, William Gibson, and China Mieville, but these authors are not likely to show up on awards ballots outside of the science fiction field, and even the bestseller lists are more often populated by "franchise" novels, written under specific guidelines to conform to the multimedia universes of movies and video games.

- It seems reasonable to ask, then, not only what enables people to enjoy science fiction but what keeps other people from reading it at all. China Mieville, a British writer whose novels mix science fiction and fantasy, was quoted in *The Guardian* in 2011 as suggesting a new way of looking at this apparent divide.
 - The real schism isn't between literary and genre fiction, or how these books are marketed differently, but rather, something more fundamental, which he called "the literature of recognition versus that of estrangement."

 - As Mieville notes, "All fiction contains elements of both drives," and "Great stuff can doubtless be written from both perspectives." Perhaps some readers take greater pleasure or comfort in recognizing characters and situations that align with what they know of "real life," while others enjoy the challenge of new and different worlds and characters, in what Mieville calls the literature of estrangement.

- The real picture is probably more of a continuum, with a few readers at one end who simply can't "get into" science fiction or fantastic literature and a few at the other end who don't want to read anything but science fiction. Most of us are probably somewhere close to the middle, able to recognize that science fiction writers can care deeply about character development and emotional truth and that "literary" writers can effectively deploy futuristic settings or new technologies or scientific concepts.

Flowers for Algernon

- One classic example of a book occupying this middle ground is Daniel Keyes's *Flowers for Algernon*, one of the most emotionally powerful stories in science fiction but, surprisingly, unrecognized as science fiction by many readers.

- The story concerns a mentally challenged bakery worker named Charlie Gordon who undergoes an experimental brain operation to improve his intelligence. But the operation is far more successful than expected, and Charlie finds himself gradually growing so intelligent that he leaves his doctors behind. Through his own research, he then discovers that the effects of the surgery are only temporary. The emotional power of the story comes from two sources, one purely literary and one purely science fictional.

- The literary aspect is the theme of alienation. At the beginning of the story, Charlie feels separated from his coworkers because of his inability to keep up with their conversations. As he grows more intelligent, the heartbreaking realization comes to him that he's been the butt of their jokes all along, but at least this realization brings him the hope that he can now have normal friendships. As he continues to grow more intelligent, though, he finds himself isolated and lonely all over again, this time because no one can quite keep up with him.

- What gives the story its real power, however, is its mode of telling. Keyes chose to write the story in the form of Charlie's own "progress reports" that he is asked to write as the experiment proceeds. Over a period of weeks, we watch these change from barely literate entries full of misspelled words and grammatical errors, into normal first-person narration, into a more erudite style expressing frustration with those around him, and then deteriorating again into simplistic sentences and misspelled words as Charlie regresses to his previous state.

- This story illustrates exactly what we've said about the relationship between science fiction and literary fiction and about the ways in which people read fiction. The reason so many people seem surprised to be reminded that it's science fiction is that it takes place mostly in a realistic setting, with well-drawn, believable characters. Because of this, it's easy to overlook the fact that the story is based entirely on an experimental medical procedure, a scientific advance that is purely speculative, in the best science fiction tradition.

- In short, *Flowers for Algernon* demonstrates that a story can easily satisfy the sensibilities of both science fiction and literary readers. At its best, science fiction can be as artful and accomplished as any other kind of fiction, and it can take us places where no other form of fiction can.

Readings

Keyes, *Flowers for Algernon*.

Silverberg, ed., *The Science Fiction Hall of Fame*, vol. 1.

Questions

1 With serious literary writers from Doris Lessing to Margaret Atwood turning to science fiction, such science fiction authors as Kim Stanley Robinson gaining more literary recognition, and respected authors, such as Jonathan Lethem or Kelly Link, apparently straddling the genre and literary worlds, is science fiction as a separate genre in danger of disappearing as it becomes part of the literary mainstream?

2 Is the science fiction that remains so popular in film, television, comics, and gaming so divorced from literary science fiction that the audiences have less and less in common, or are these simply expressions in different media of the same core values of imagination and storytelling?

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Fiction

Note: Science fiction novels and stories tend to go in and out of print on an irregular basis, while some titles, especially classic ones, may be available in multiple editions at the same time. A few, such as Chesney's "The Battle of Dorking," are free in their entirety on various websites. For more recent titles, the first edition is generally listed; for translated titles, where possible, the preferred translation is listed. Some current titles, as well as older classics, may be available in both e-book formats and print. Other titles are listed in editions most recently available at the time of compiling this bibliography. Some titles may be available only through libraries or used book services.

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Russell, Mary Doria. *The Sparrow.* New York: Ballantine, 1987. A powerful and disturbing consideration of the role of religion and faith in science fiction, depicting the unforeseen results of a Jesuit-sponsored expedition to a distant planet featuring two societies, neither of which is what it first appears to be.

Shelley, Mary. *Frankenstein, or the Modern Prometheus*. Oxford: Oxford University Press, 2009. Cited by many as the first work of science fiction in the modern sense, Shelley's classic created one of the most iconic figures in the history of popular culture, spawning dozens of spinoffs, sequels, and movies. This edition is of the original 1818 text, and although Shelley issued a revised edition in 1831 (also widely available), many scholars prefer this version, which created the initial sensation and preserves Shelley's original intentions.

Silverberg, Robert. *The World Inside.* New York: Orb, 2010. An ironic and highly imaginative response to the overpopulation concerns of the 1960s, Silverberg's 1971 novel presents a world in which a population of some 75 billion live in giant high-rise arcologies and in which procreation is considered the highest virtue. The faux-cheerful tone of the early chapters turns darker as this natalist utopia is gradually revealed as an overregulated, nightmarish dystopia.

——, ed. *The Science Fiction Hall of Fame,* Volume 1: *1929–1964.* New York: Orb, 2005 (reprint of the 1970 edition). When the Science Fiction Writers of America voted on the best science fiction stories published before 1964, the result was this anthology, which provides a useful overview of what science fiction writers themselves considered the finest examples of their craft. It includes such stories as Murray Leinster's "First Contact," Lester del Rey's "Helen O'Loy," Arthur C. Clarke's "The Nine Billion Names of God," and Daniel Keyes's *Flowers for Algernon*.

Smith, Edward E. *The Skylark of Space*. Lincoln, NE: Bison Books, 2001. Originally written between 1915 and 1921 but not published until its serialization in the pulp *Amazing Stories* in 1928, this extravagant galactic

adventure became enormously popular and helped define the subgenre known as space opera.

Stapledon, Olaf. *Last and First Men.* Mineola, NY: Dover Publications, 2008. A virtual sourcebook for later science fiction writers, Stapledon's visionary novel from 1930 recounts the entire history of the human race through multiple "species," from the 20th century through millions of years in the future.

———. *Star Maker.* Mineola, NY: Dover Publications, 2008. Stapledon's 1937 novel treats the vast time scale of *Last and First Men* as merely a sliver in the larger history of the universe, as presented through the out-of-body experiences of a contemporary Englishman. The novel spans the origin of the universe in a version of the big bang through the final collapse billions of years in the future.

Stephenson, Neal. *Snow Crash.* New York: Spectra, 2000. A 1992 novel that revived interest in the cyberpunk movement through its portrayal of a future in which police and national security services are entirely privatized, a virtual reality environment competes with experiential reality, and such ideas as religious beliefs are discovered to behave literally as viruses.

———. *Seveneves.* New York: William Morrow, 2015. Humanity nearly faces extinction after the Moon is destroyed and fragments rain down on Earth, making it uninhabitable for thousands of years. The story focuses on a handful of survivors in space habitats and the efforts of their descendants to recolonize Earth generations later.

Sterling, Bruce. *Zeitgeist*. New York: Spectra, 2001. Set in the immediate, pre-millennium past rather than the future, Sterling's description of a singing group manufactured entirely by a media entrepreneur deliberately blurs the line between speculative science fiction and cutting-edge contemporary culture.

Stewart, George R. *Earth Abides.* New York: Del Rey, 2006. Although Stewart was not a science fiction writer, this elegiac epic covering generations of the survival of a family in a diminished society following a worldwide plague received the first of the short-lived International Fantasy Awards in 1950.

Tidhar, Lavie. *Osama.* Oxford: Solaris, 2012. One of the Israeli-born writers' risk-taking explorations of alternate history, *Osama* takes place in a terrorism-free world in which the career of Osama bin Laden exists only in a series of pulp novels. A later novel, *A Man Lies Dreaming* (2014), depicts Hitler, having lost the 1933 German elections to the communists, working as a down-and-out private eye in London in 1939.

Tiptree, James, Jr. (Alice M. Sheldon). *Her Smoke Rose Up Forever.* San Francisco: Tachyon, 2004. The most complete collection of the pseudonymous Tiptree's most famous stories, including "The Women Men Don't See," "The Screwfly Solution," and *Houston, Houston, Do You Read?*

Twain, Mark. *A Connecticut Yankee in King Arthur's Court.* In *Mark Twain: Historical Romances: Prince and the Pauper / Connecticut Yankee in King Arthur's Court / Personal Recollections of Joan of Arc.* New York: Library of America, 1994. Twain's 1889 classic satire of both American industrialism and romantic versions of Arthurian legend is one of the earliest bestselling novels involving time travel.

Van Vogt, A. E. *Slan.* New York: Orb, 1998. Characteristic of Van Vogt's rapid-fire style and pacing, this tale of beleaguered mutants was originally serialized in a pulp magazine in 1940 and published as a novel in 1946; it became a favorite among science fiction fans who may have identified with the outsider protagonist.

Verne, Jules. *From the Earth to the Moon.* In *Amazing Journeys: Journey to the Center of the Earth, From the Earth to the Moon, Circling the Moon, 20,000 Leagues under the Seas, and Around the World in 80 Days*. Translated by Frederick Paul Walter. Albany, NY: State University of New York Press, 2010. Verne's influential 1865 tale of a Moon shot carried out by an American gun club should be read in conjunction with its sequel, *Around the Moon* or *Circling the Moon*; if possible, it should also be read in a contemporary translation, such as this edition. Nineteenth-century translations tend to be stilted and clumsy, sometimes even altering Verne's original text in important ways.

Wells, H. G. *The Time Machine.* New York: Penguin Classics, 2005. This edition of Wells's 1895 time-travel tale, which established the notion of time

travel as a technological achievement rather than a magical event, contains a restored text and useful supporting material. Many editions are available, but a few are erroneously based on an expurgated school edition published later in Wells's life.

———. *The War of the Worlds. A Critical Edition of The War of the Worlds: H. G. Wells's Scientific Romance.* Edited by Harry M. Geduld and David Y. Hughes, Bloomington, IN: Indiana University Press, 1993. Wells's seminal tale of Earth invaded by an advanced Martian civilization is here presented with critical and historical material concerning its origins, publication history, and influence.

Willis, Connie. *Doomsday Book*. New York: Spectra, 1993. Willis's somber tale of a time-traveling Oxford historian trapped in 14th-century England during the black plague is probably the most successful of her series of historical time-travel tales. The work suggests that the end of the world, for many times and places, has happened repeatedly in the past.

Wolfe, Gary K., ed. *American Science Fiction: Nine Classic Novels of the 1950s*. New York: The Library of America, 2012. A collection of carefully researched texts of major novels of the 1950s, including Bester's *The Stars My Destination*, Blish's *A Case of Conscience*, Pohl and Kornbluth's *The Space Merchants*, and Sturgeon's *More Than Human*.

Wolfe, Gene. *The Book of the New Sun. Shadow and Claw: The First Half of The Book of the New Sun*; *Sword and Citadel: The Second Half of The Book of the New Sun.* New York: Orb, 1994. One of the masterworks of contemporary far-future science fiction, *The Book of the New Sun* was originally published between 1980 and 1983 as four separate novels: *The Shadow of the Torturer*, *The Claw of the Conciliator*, *The Sword of the Lictor*, and *The Citadel of the Autarch*. It was followed by two more series, *The Book of the Long Sun* (1993–1996) and *The Book of the Short Sun* (1999–2001).

Zamiatin, Evgeny. *We.* Translated by Natasha Randall. New York: Modern Library, 2006. Zamiatin's 1924 dystopian novel was a major influence on later dystopian fiction, most notably George Orwell's *Nineteen Eight-Four*. More contemporary translations, such as this one, restore some of the material corrupted in earlier versions.

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